ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

PAPER

Vol. XCVI, No. 25 Thursday, June 22, 1933

President Signs The National Recovery Act

Measure Is Designed For Cooperation Among Trade Groups, To Induce and Maintain United Action of Labor and Management Under Adequate Governmental Sanction and Supervision, To Eliminate Unfair Competitive Practices, To Reduce and Relieve Unemployment and To Improve Standards of Labor

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 21, 1933—The National Industrial Recovery Act was passed by Congress before it adjourned last week. It has been signed by the President and is now law. As the bill finally passed and became law it is as follows:

Declaration of Policy

SECTION 1. A national emergency productive of widespread unemployment and disorganization of industry, which burdens interstate and foreign commerce, affects the public welfare, and undermines the standards of living of the American people, is hereby declared to exist. It is hereby declared to be the policy of Congress to remove obstructions to the free flow of interstate and foreign commerce which tend to diminish the amount thereof; and to provide for the general welfare by promoting the organization of industry for the purpose of cooperative action among trade groups, to induce and maintain united action of labor and management under adequate governmental sanctions and supervision, to eliminate unfair competitive practices, to promote the fullest possible utilization of the present productive capacity of industries, to avoid undue restriction of production (except as may be temporarily required), to increase the consumption of industrial and agricultural products by increasing purchasing power, to reduce and relieve unemployment, to improve standards of labor, and otherwise to rehabilitate industry and to conserve natural resources.

Administrative Agencies

SEC. 2. (a) To effectuate the policy of this title, the President is hereby authorized to establish such agencies, to accept and utilize such voluntary and uncompensated services, to appoint, without regard to the provisions of the civil service laws, such officers and employees, and to utilize such Federal officers and employees, and, with the consent of the State, such State and local officers and employees, as he may find necessary, to prescribe their authorities, duties, responsibilities, and tenure, and, without regard to the Classification Act of 1923, as amended, to fix the compensation of any officers and employees so appointed.

(b) The President may delegate any of his functions and powers under this title to such officers, agents, and employees as he may designate or appoint, and may establish an industrial planning and research agency to aid in carrying out his functions under this title.

(c) This title shall cease to be in effect and any agencies established hereunder shall cease to exist at the expiration of two years after the date of enactment of this Act, or sooner if the President shall by proclamation or the Congress shall by joint resolution declare that the emergency recognized by section 1 has ended.

Codes of Fair Competition

SEC. 3. (a) Upon the application to the President by one or more trade or industrial associations or groups, the President may approve a code or codes of fair competition for the trade or industry or subdivision thereof, represented by the applicant or applicants, if the President finds (1) that such associations or groups impose no inequitable restrictions on admission to membership therein and are truly representative of such trades or industries or subdivisions thereof, and (2) that such code or codes are not designed to promote monopolies or to eliminate or oppress small enterprises and will not operate to discriminate against them, and will tend to effectuate the policy of this title: *Provided,* That such code or codes shall not permit monopolies or monopolistic practices: *Provided further,* That where such code or codes affect the services and welfare of persons engaged in other steps of the economic process, nothing in this section shall deprive such persons of the right to be heard prior to approval by the President of such code or codes. The President may, as a condition of his approval of any such code, impose such conditions (including requirements for the making of reports and the keeping of accounts) for the protection of consumers, competitors, employees, and others, and in furtherance of the public interest, and may provide such exceptions to the exemptions from the provisions of such code, as the President in his discretion deems necessary to effectuate the policy herein declared.

(b) After the President shall have approved any such code, the provisions of such code shall be the standards of fair competition for such trade or industry or subdivision thereof. Any violation of such standards in any transac-

(Continued on page 17)

Wisconsin Paper Mill Machinery Plants Busier

Valley Iron Works, of Appleton, Adds Fifty Workers to Take Care of Greatly Increased Orders —Appleton Machine Co. Reports Full Crew Working on Eight Hour Daily Schedule— Allis-Chalmers Co. Expands Working Staff and Lengthens Operations

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., June 19, 1933.—An indication that paper mills of this section are getting themselves in shape for increased production and a normal program of plant improvements is shown in the upturn of activity in allied plants making machinery.

Valley Iron Works, Appleton, Wis., has called fifty men back to work to take care of the largest volume of orders received for more than a year. The total plant force is now eighty. Additional men will be put back to work within the next ten days, according to R. A. Peterson, treasurer.

Appleton Machine Company, Appleton, Wis., has experienced a gradual increase in business, according to Carleton E. Saecker, secretary and treasurer. The last three or four months have brought sufficient business so the full crew has been put back to work on an 8-hour daily schedule.

Allis-Chalmers Company, Milwaukee, has increased its working force from 4,000 to 4,300 within the last month, and also had lengthened the schedule of hours for the men. Cutler-Hammer Company, Milwaukee, shows an increase in a month from 1,000 to 1,200, with hour schedules lengthened.

Two mills also report increases. Thilmany Pulp and Paper Company, Kaukauna, Wis., has increased the number of hours of work for the men now employed 25 per cent. No new men are being added as yet. Hummel & Downing, Milwaukee, added 100 to its working force within a month, bringing the total to 700 men working on six-hour shifts. Milprint Products Company, Milwaukee, gained 25 employes within the last month and has 275 at work on longer schedules than formerly.

Rebuilding of the plant of the Menasha Mill Supply Company, Menasha, Wis., which was almost totally destroyed by fire recently, is to be started within a few days. The building is owned by the Allen Waste Paper Company, Chicago, but negotiations for its purchase by the Menasha company are under way, according to F. M. Rosenthal, manager.

Forest Conservation Program

Funds appropriated under the public works bill will be allotted to the United States Forest Products Laboratory, Madison, Wis., according to a decision of Lewis Douglas, federal budget director at Washington. The money will be used to further the conservation program. The amount requested is $279,000, but Mr. Douglas has not announced whether the full sum will be allowed.

Authorization has also been given by the National Forest Reservation Commission at Washington for the purchase of additional cutover lands in Wisconsin, Michigan and Minnesota to be used for federal reforestation. The lands are being obtained at an average cost of $1.70 an acre. Improvement projects under the emergency conservation program will be extended to many of the areas acquired.

Among the additions to the Wisconsin federal forests will be the following, with their respective costs: Argonne, 7,980 acres, $13,895.06; Flambeau, 740 acres, $1,042.00; Moquah, 3,616 acres, $4,570.31; Chequamegon, 136,677 acres, $203,446; Oconto, 38,513 acres, $43,263.44; Mondeaux, 86,802 acres, $112,290.45.

Michigan purchases will include: Huron, 5,118 acres, $7,712.19; Marquette, 5,685 acres, $8,320.51; Hiawatha, 4,907 acres, $7,989.82; Ottawa, 1,944 acres, $2,946.91.

Minnesota purchases: Superior, 22,820 acres, $50,969.80; Mesaba, 28,595 acres, $61,536.70.

Safety Conference Planned

Paper mills will be liberally represented at the annual Wisconsin River Valley Safety Conference to be held at Wisconsin Rapids, Thursday, June 22. C. E. Jackson, of the Consolidated Water Power and Paper Company, will be one of the speakers on accident prevention. The paper and pulp mill section will be in charge of Fred Braun, of the Employers Mutual Liability Insurance Company, Wausau, Wis. Other speakers at the sessions during the day will be Dr. R. W. Rice, of Stevens Point, Wis., and Edgar G. Doudna, secretary of the board of regents of normal schools, Madison, Wis. An evening dinner is to be held at Hotel Witter, at which F. S. Hyer, president of the Central State Teachers College, Stevens Point, Wis., will give the principal address.

News of the Industry

The Mosinee Paper Mills Company, Mosinee, Wis., formerly the Wausau Sulphate Fibre Company, will receive an abatement of $45,949.35 on federal income taxes, according to announcement of the United States treasury department. The abatement was awarded because of overassessments of income and profits taxes. The board of tax appeals decided that the deficiency determined against the company's 1918 tax return was excessive.

A hearing is to be held June 29 by the Wisconsin Public Service Commission as the result of a petition that a proper head of water be maintained back of the Wisconsin river dam at the site of the former Tomahawk Pulp and Paper Company. A change is necessary to preserve the dam and protect fish life, the petition states. An investigation is being made by George P. Steinmetz, hydraulic engineer for the commission.

J. H. Noble Joins Improved Paper

J. H. Noble, for several years superintendent of the soda pulp mill of the New York and Pennsylvania Company, of Johnsonburg, Pa., and for the past seven years representing the Oliver United Filters Inc., from which position he resigned two month ago, is now associated with the Improved Paper Machinery Company, of Nashua, N. H., manufacturers of pulp mill equipment, as sales representative.

Prices Versus Production

The Farrel-Birmingham Company, Inc., manufacturers of chilled rolls and heavy machinery, of Ansonia, Conn., has just published an interesting booklet entitled "Prices Versus Production," written by Allen W. Rucker, in collaboration with N. W. Pickering, president of the company. The importance of volume as a factor in the prosperity of the country and some of the causes that retard volume are discussed in a very informative manner.

Ontario Cabinet Investigates Abitibi Claims

Provincial Government, Having Taken Over Abitibi Canyon Power Development, Assumes Liability for Accounts Outstanding, Mainly of Constructural Character—Final Adjustment Involves Interpretation of Elaborate Agreements

[FROM OUR REGULAR CORRESPONDENT]

TORONTO, Ont., June 19, 1933.—For over six hours this week the Ontario Cabinet and Chairman John R. Cooke and officials of the Ontario Hydro-Commission, wrestled with details of accounts outstanding against the Abitibi power project, taken over by the Government from the Abitibi Power and Paper Company. At the end of the conference Premier Henry announced that the Ontario Hydro-Electric Commission had been instructed by the Cabinet to make investigation into all the accounts, negotiate with the creditors and report back to the Cabinet.

About $5,000,000 in all is involved in the settlement of the accounts outstanding against the development, which are mainly of a constructural character. The Dominion Construction Company, contractors, is said to be the main creditor. According to the Prime Minister, the task in the final adjustment by the Government of outstanding claims involves interpretations of elaborate agreements. The Government, having taken over the property and rights, of course, assumes liability for accounts outstanding.

Box Firm's Earnings Fall Off

Operations of Canadian Wirebound Boxes, Ltd., Toronto, manufacturers of wirebound and corrugated boxes, for the year ending April 30, 1933, resulted in a loss of $511, compared with a profit of $36,072 in the previous year, according to a statement just issued. Payment of dividends of $35,807 and taxes left a deficit of $37,245, and reduced earned surplus from $39,147 to $1,902. Current assets of $376,993 are approximately nine times current liabilities of $41,501. Net working capital amounts to $335,492. President James Playfair explains the year's loss of $511 is after depreciation of $47,054 and absorbing in the year's operations $5,623, representing one-third of the deferred charges are Toronto Corrugated operations.

Pulp and Paper from Bamboo

"When and if coniferous forests of the world fail to meet the draining demand for cellulose paper requirements, man may turn to bamboo as a raw material to replace vanished conifers." Such was the suggestion contained in a paper by M. P. Bhargava, of the Imperial Research Institute, Betra Dun, India, read before the Forest Section of the Fifth Pacific Science Congress in Vancouver a few days ago. "Almost inexhaustible supplies of bamboo are available in tropical and subtropical regions of the world, and investigations carried out by the institute at Betra Dun have found bamboo to be an excellent pulp and paper making material," he said.

Notes and Jottings of the Trade

George Rauch, superintendent of the Interlake Tissue Mills at Merritton, Ont., and John E. Carruthers, connected with the company's research department, have returned from the convention of the American Pulp and Paper Mill Superintendents' Association at Green Bay, Wis.

Lieut. Gordon Speedie, of the head office staff of Provincial Paper Ltd., Toronto, is spending his vacation in camp at Niagara Falls, Ont., with the Mississaugua Horse.

W. Woodroofe, who has charge of the paper bag department of Alliance Paper Mills at Merritton was at the head office of the company in Toronto for a couple of days this week. Mr. Woodroofe reports that the flour sack department of the mill is quite busy and that production and sales are keeping up well.

Boston Paper Market Active

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 19, 1933—Favorable reports from both merchants and manufacturers of paper continued during the last week. The market is at least fairly active to good in fine paper. There is considerable inclination to cover for requirements, tending to bring about lifting of prices. The demand is broad, including practically all lines. Bonds and ledgers are in good call, and advertisers are placing orders in substantial volume.

Wrapping paper demand is at least fair, in some cases good, with much optimism prevailing. Prices are strong. Box coverings were at least in fair demand. The call for specialties was sustained.

More activity developed in box board. Sharp advances, due to the increase in the price of paper stock, took place during the week, so that there was a slight feeling of apprehension. Most increases were $5.00 a ton, some even higher. Filled news board advanced to $42.50 @ $47.50, compared with a former range of $37.50 @ $42.50; chip board to $40.00 @ $45.00, against $35.00 @ $40.00; single manila lined chip to a flat $42.50, against $37.50 @ $42.50; and single white, patent coated news board-bender to $60.00 @ $70.00, against $55.00 @ $60.00.

The general tendency of paper stock continues upward. Old papers are in "strenuous" demand, with the supply very limited. Advances took place in many grades, from 3½ cents to 20 cents per hundredweight. Many grades of bagging advanced, prices being marked up from 5 cents to 35 cents.

New Pfaltz & Bauer Catalog

"Sartorius Analytical Balances" is the title of a new catalog issued by Pfaltz & Bauer, Inc., of 300 Pearl street, New York. This booklet covers Analytical Balances, Weights, Balance Accessories and certain Laboratory Specialties, such as the "Fixanal" Volumetric Solutions, Test Papers, the "Wulff" Hydrogen Ion Determination Apparatus and "Kolthoff" Buffer Tablets.

Another catalog issued by Pfaltz & Bauer is entirely devoted to the "Wulff" pH Tester, describing its application to industry, with a treatise covering the fundamental principles on hydrogen ions, by A. Colin-Russ, Ph.D. F.I.C.

Alton Boxboard & Paper Co. Starts

LAFAYETTE, Ind., June 19, 1933—The Alton Boxboard and Paper Company this week began production at the recently acquired plant here. The schedule calls for capacity production at present. Ninety-five men were put to work with promise of increase in employment if extra hours are required. The plant has been idle more than a year.

Canadian News Print Interests More Hopeful

View Expressed That National Industrial Recovery Bill, Adopted at Washington, Will End Cut-Throat Competition—Operators Hold Measures to Stabilize United States Industry Must Inevitably Revive Prosperity for Dominion Manufacturers

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., June 19, 1933.—While news print concerns, in their statements to shareholders, continue one after the other to reflect the heavy losses on operation which the present cut-throat competition is causing—the latest being the Canadian International Paper Company with a consolidated net loss of more than four and a half million dollars in 1932—operators and investors alike are beginning to see a ray of light and some are even talking of the imminence of a revival in the news print industry.

This ray of light is provided by the National Industrial Recovery Bill adopted at Washington under the provisions of which it will be possible to prevent cut-throat competition in news print prices. Much satisfaction is expressed at the fact that at a preliminary meeting in Boston of 21 representatives of American news print companies an association of news print manufacturers of the United States was formed and a committee named to formulate a code to meet the requirements of the Bill.

It is not expected that any Canadian companies will join this association, but it has been suggested that mills in this country may form a similar association and adopt the American code or its equivalent.

It is taken for granted, of course, that under the code American manufacturers will establish a minimum price which would prevent Canadian producers from securing business in the United States market at prices which would undersell American mills.

This is what Canadian operators have been endeavoring to accomplish for the past four years, but which they have been unable to bring about through failure to agree upon a basis of cooperation.

Operators here do not overlook the fact that the primary motive of the new American association will be to rehabilitate the news print industry in the United States, but they hold that measure to this and must inevitably be reflected in reviving prosperity for Canadian concerns.

Canadian I. P. Shows Loss

Canadian International Paper Company and subsidiary companies report that consolidated net earnings, before interest and reserves, for 1932 was $3,649,798, which was slightly less than interest requirements on the first mortgage bonds of the company and prior liens, including obligations of subsidiaries. After all charges the company in 1932 had a consolidated net loss of $4,694,522.

During the year funded debt was reduced by $3,486,098, bank debt by $1,616,625, and other current liabilities by $678,915, a total of $5,781,638. Against this there was an increase of $2,646,437 in indebtedness to affiliated companies, and a reduction of $6,965,632 in current assets. On December 31, 1932, current assets totaled $22,001,320, compared to $5,422,620 of current liabilities, a ratio of more than four to one.

Production of the mills now controlled by the company totaled 493,433 tons of newsprint and 119251 tons of sulphite pulp in 1932, compared to 644,841 tons of newsprint and 131,099 tons of bleached sulphite pulp in 1931. In addition to this reduced volume there were heavy declines in prices both for newsprint and for sulphite pulp. The effect of these adverse factors was offset in part by marked improvement in operating efficiency, by lower salaries and wages, and by reductions in administrative costs.

All these figures include New Brunswick International Paper Company and International Power and Paper Company of Newfoundland, Limited.

Consolidated profit and loss statement for year ended December 31, 1932, is as follows:

Gross sales	$30,227,722
Less: Cost of sales and expenses, less other income and profit on exchange	26,864,478
	$3,363,244
Add: Profit on bonds and debs. redeemed	286,554
Net revenue, including other income	$3,649,798
Less: Int. on sub. cos. obligations	2,232,239
Int. on Can. Int. Paper Co. first mort. bonds and prior liens	1,495,932
Other int., amort. of disc., etc.	2,236,630
Depreciation and depletion	2,379,519
Net loss	$4,694,522

Rates Reduced on Pulpwood Exports

Lower railway freight rates on shipments of pulpwood from New Brunswick to the state of Maine are to be put in effect on the Canadian railways on June 27. The decrease ranges from 3½ to 6 cents per hundredweight, varying with the length of haul.

This action is expected to result in a healthy increase in the quantity of pulpwood taken out this year. Present estimates are that approximately 100,000 cords will be cut and peeled this season, providing employment to hundreds during the summer and furnishing woods activities in some sections hitherto idle.

A great deal of the pulpwood will be used within the province, while various Maine mills, notably the Seaboard Paper, have contracted for substantial amounts.

J. F. McCarthy Opens Warehouse

J. F. McCarthy, Inc., paper jobbers, of 71 West 35th Street, New York, announce the opening of their new warehouse at Stroudsburg, Pa.

Catering to a Pennsylvania as well as a New York clientele, this warehouse, located within a few hours of New York City in conjunction with their daily trucking service, finds them ideally situated. They expect to carry standard sizes and grades of book and magazine papers.

During the past year their sales have shown a considerable increase and two additional salesmen have just been added to their force.

American Writing's Machine

In an item in the PAPER TRADE JOURNAL last week regarding the Paper Exhibit at the Century of Progress at Chicago, the small paper machine which is an attractive feature of the Exhibit was erroneously credited to another paper company in place of the American Writing Paper Company, Inc., of Holyoke, Mass., by which concern it was loaned.

In the same item the name of Charles Lynch, who, with W. B. Wheelwright, is stationed at the Exhibit, was misspelled.

Boston Paper Trade Association Holds Outing

BOSTON, Mass., June 19, 1933—With fair skies and a good attendance, the regular June meeting and outing of the Boston Paper Trade Association was held at the Charles River Country Club, Newton Centre, Mass., on June 12. Guests began to arrive in the morning and a buffet luncheon was served from 11:30 on. Facilities of the club were at the disposal of the members of the association all day. After luncheon the golfers were all set to tee off, and the other outdoor sports program began.

Dinner was served at 6.45 P.M. President Charles A. Esty presided. After a bountiful feast President Esty announced that it was an informal meeting and that 93 were present. Two new members, Henry F. Bigelow, of the Weyerhauser Lumber and Paper Company, and Everett M. Hughes, of the Strathmore Paper Company, were elected. W. Edwin Porter, Jr., chairman of the golf committee, presented the prizes won at golf. He announced that 52 contestants were in the tournament, 29 members and 23 guests.

John L. Munro Wins Golf Cup

For the second time, John L. Munro won the best net in Class A in the eleventh year's play for the handsome silver golf championship cup offered by the Boston Paper Trade Association. It must be won three times to become the permanent property of the winner. It remains in the custody of the winner of the best net score each year until the succeeding year's play and until such time as some one shall have won it three times. Mr. Munro also won a silver vase.

Previous winners are Charles A. Esty, William Stetson, Jr., Asaph Churchill, John L. Munro, E. Lindsey Cummings, Edward Bement, William Stetson, Jr., Norman Harrower, W. Edwin Porter, Jr., John R. Whitney and W. H. Anders.

The first gross in Class A-Handicap, 21 and under, was won by John R. Whitney, a silver vase; the second net by W. E. Porter, Jr., silver candlesticks. Class B-Handicap, 22 and above, the first net was won by William J. McLellan, silver bowl; first gross by E. R. Lyman, silver cigarette box; second net, E. A. Moses, silver vase. In the kicker's handicap, W. N. Stetson Jr., won a special prize, a silver plate, after a play-off with E. L. Cummings; Constant Southworth won another special prize, a silver plate, after a play-off with John Vivian. Robert F. O'Neill won the guest prize, a silver compote dish.

Willard Loud, chairman of the sports committee, announced the prizes. Frank B. Cummings won the quoits prize, a telechron clock; Charles A. Shaw, bowling, a fountain pen; Harry C. Thayer, miniature golf, silver candlesticks; Nathan Clark, archery, a flashlight; and E. S. Clark, putting on the green, a reading lamp. The baseball game was called off, on account of the heat.

The sports committee was composed of Willard H. Loud, chairman, Edmund G. Sullivan, Royal P. Teele, Warren L. Chace, T. Compton Walsh and Harold C. Upham. Golf committee, W. Edwin Porter, Jr., chairman; E. D. Bement, J. G. Swift, F. B. Cummings and W. K. Graves.

Officers of the Association are: Charles A. Esty, president; F. Bendel Tracy, 1st vice-president; Frederick W. Main, 2d vice-president; T. Charles Casey, treasurer, and J. L. Hobson, secretary.

Those Who Attended

Those present included Albert R. Smith, Willard H. Loud, Charles A. Esty, W. E. Porter, Jr., F. Bendel Tracy, J. L. Hobson, Frank B. Cummings, Jesse G. Swift, Howard E. Chase, George Stuhr, Herbert W. Robbins, H. C. Thayer, E. B. Dik, C. P. Mitchell, W. H. Anders, Clifford Goodall, Frank H. Merrill, T. K. Davis, Geo. W. Wise, Jr., K. H. Ways, John E. Roach, Wm. S. Smock, Wm. C. Ross, R. P. Teele, W. Gardner Very, Harold C. Upham, W. W. Binford, E. L. Johnson, Constant Southworth, E. Lindsey Cummings, Hartley A. Hurlbert, Charles A. Shaw, Matthew O. Bryne, A. A. McIlwain, Maurice A. Park, Fred B. Korbel, W. N. Stetson, Jr., H. R. Woodward, Gordon Blanchard, E. H. Little, W. A. Allen, S. A. Shannon, William H. Hilton, C. W. Nelson, E. W. Pierce, C. Frederic Wellington, Wallace K. Graves, E. E. Rice, W. L. Chace, H. A. Lindenberg, H. C. Ham, Earl S. Clark, P. D. Poinier, J. L. Munro, George W. Wheelwright, W. J. McLellan, T. C. Green, E. R. Lyman, C. W. Fields, Graham Blandy, 2d, Arthur L. Hobson, John E. A. Hussey, Charles S. Proctor, Joseph D. Snell, D. K. Brown, D. R. Smith, K. F. Miller, E. M. Wright, F. T. Burkhardt, L. A. Maglathlin, R. B. Rising, Louis L. Claflin, Carl W. Wood, E. W. Stone, Arthur M. Burr, Arthur W. Frank, Edgar P. Hay, S. Walker, R. M. Stone, J. R. Whitney, E. T. Simpson, Nathan Clark, Otto Johnson Shepard, H. C. Fowler, N. J. Patterson, R. F. O'Neill, A. T. Carter, Hubert W. Lockhart, R. F. Chapin, Jos. A. Moses, Everett F. Howarth and Charles Casey.

Indianapolis Demand Improves

INDIANAPOLIS, Ind., June 19, 1933.—A better tone is seen in the local paper market in virtually all lines, with summer specialties jumping to the forefront. The lower grades of paper seem to have been benefitted most during the last two weeks. Local converters are loath to quote prices for more than thirty days and prefer to quote them on delivery. According to some of them they are merely following the lead set by the mills. For instance, one large user wired late last week for quotations on a car of paper. Three queries were sent out. One mill could not handle the order at all, another would give shipment only on prices current when the merchandise was delivered and the other finally quoted a thirty-day price.

In the wax paper field, prices here have been increased about five per cent. According to Karl Zimmer, head of the Zimmer Paper Products Company here this increase is fully warrantted by increasing costs of raw materials. Incidently the Zimmer plant in line with governmental policies, has curtailed the number of hours permitted any one employee to work, put more men to work and has increased wages.

The container field also has been improved during the last week. Demand is broadening in that more and more industries are entering the buying market. Prices are firm with every indication of increases. Demand for news print also is increasing. The last week or two has seen a number of local advertisers coming out with entire sections, something new for the last three or four years. Dealers in print here say the demand out in the state is increasing also, indicating a return to the advertising field of a number of local merchants.

Of course the trade for summer specialties is increasing seasonally. The first part of last week saw a lull due to subnormal temperatures, but with warmer weather toward the week-end, demand picked up again. The fine paper demand is about the same as it has been for some time. Prices, though are firm. Paper stock men are complaining of low mill prices, but regardless, still are doing business.

Demand for Paper Expands in Philadelphia

Both Fine and Coarse Paper Markets Exhibit Considerable Improvement—Paper Board Mill Operations Approximate Full Capacity—Upward Swing Experienced in Paper Stock Market Continues—Higher Grades of Waste Paper Bring Better Prices

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., June 19, 1933—At no time during the past five years have the Philadelphia paper stock packers been in as jubilant a mood as today. After one week of tremendous activity, another week, seemingly even more prosperous, is opened up. And at no time during the past five years has there been such an upward swing of prices which the mills are willing to pay as has been enjoyed during the last two weeks, and particularly the past seven days. Reports received by the larger packers indicate that the board mills are either working at full capacity or are approximating this condition and will attain it very shortly. So far as the packers are concerned they report not only the willingness but the eagerness of the mills to take virtually all that is offered at present advanced prices, but steep as this increase has been, a number of the packers believe that for the better grades at least, which until this week had not enjoyed any of the improvement, prices must go higher. And so a number are refusing to sell stock of the better grade because this grade, they believe, can profitably be stored.

Better Prices for Better Grades

Meanwhile, every other day during the past week brought out better prices for the better grades. No. 1 hard white shavings moved up 30 cents, although No. 2 hard whites remained steady but at outside quotations; No. 1 soft white likewise moved up and No. 2 soft white also remained steady. No. 1 and No. 2 mixed solid ledger stock, writing paper, No. 1 Books, heavy, and No. 2 Books, light, No. 1 New Manilla and No. 1 Old Manilla, Print Manilla, Container Manilla, Old Krafts—all jumped up and there were continued advances despite the decided upward trend reported a week ago, in the entire list of common and mixed papers, chips, overissues and old newspapers. As one dealer expressed it—"You can now sell anything that looks like waste paper at $12 a ton as a minimum." Compared to mill demand, a real shortage exists. Whether the increased prices, which, after a lapse of some years make the paper stock business actually profitable, will continue is some problem. Some of the less optimistic are not overly confident that mill demand will continue or that there may be some price recessions if stock goes out in volume. It is explained that many producers of waste paper have been sending it to the furnace in the past because it was not profitable to store it up for the packers. The best information, however, that so far as the better grades are concerned, present prices not only will be maintained but will advance.

Some Improvement Shown

Meanwhile, both the fine paper and the coarse paper business show considerable improvement, not of course comparable to the real boom existing in waste paper. Advance of 10 per cent was reported during the week in a number of lines, with coated blanks leading.

The Industrial Recovery Act is giving decided concern to the waste paper dealers particularly and the rather somnulent Philadelphia Waste Merchants' Association is becoming quite active. Its officials have got in touch with the National Association of Waste Material Dealers and with a sister organization in New York City, in an effort to ascertain what is being done in the adoption or modification of a Code of Ethics in the light of the Industrial Recovery Act, and as soon as this information is available a meeting will be called by Secretary McGarrity for action.

George W. Ward Discusses New Deal

An exposition of the Industrial Recovery Act, as it applies to the paper trade, was given by George W. Ward at the outing during the week of the Philadelphia Paper and Cordage Association at the Bankers' Country Club, Ambler, Pa. While its membership ranks now include a majority of the dealers in the coarse paper, twine and allied lines in Philadelphia, all engaged in these activities were invited irrespective of membership in the association. At the luncheon in the Clubhouse where the association's banner formed the drapery of the mantelpiece, Mr. Ward discussed the "New Deal" represented by the Recovery Act, and an address was also made by William A. Hentz, of the D. L. Ward Company. New members recently elected were represented by J. R. Howarth, of the J. R. Howarth Paper Company, and O. Kai Madsen, of the Badger Paper Mills, Inc., of Peshtigo, Wis., together with Frank W. Winne and Son, represented by Amos M. Coath. These recent additions bring the membership in the association to twenty-eight, but the campaign is being continued and the membership committee headed by Fred. I. Brower is hopeful of attaining a total of thirty-six by early Fall. Frank B. Hooper, of Baltimore, father of George K. Hooper, president of the association, was a guest.

Paper Centenary Firms Honored

The Philadelphia paper and allied trades were most conspicuous during the week in the Tenth Annual Centenary lunch given by the Philadelphia Chamber of Commerce as a tribute to Philadelphia firms continuously in business for at least one hundred years. The speaker of the day, Henry I. Harriman, President of the Chamber of Commerce of the United States of America said that not even London, with its centuries of history, could show a record equal to that of Philadelphia. On this Honor Roll of centenary firms are the following with dates of their founding: Dill & Collins Company, 1690; Shryock Bros., 1790 and Philadelphia Quartz Company, 1831.

News of the Trade

Charles Griffiths, for eighteen years with the D. L. Ward Company, from the time the business of the Wilkinson Bros. Company was taken over by it, has now taken a position with the Thos. W. Price Company. He will call on the fine paper trade and will also be in the office part of the time.

Another accession to the Price sales organization is Philip C. Weidner, formerly of the Paper Merchants, Inc. He will also call on the fine paper trade.

The Philadelphia Paper Trade Association held its regular meeting last Wednesday, and optimism among those in attendance was higher than has been felt for many weeks past.

Obituary

Edwin Riley

LIVERMORE FALLS, Me., June 12, 1933—Edwin Riley, aged 86, pioneer wood pulp paper maker in the United States, former State Commander of the Grand Army of the Republic, and the last surviving member of Kimball Post, No. 38, of this town, died Saturday, June 3, at his home on Main street. He was taken ill the previous Friday and failed rapidly. On Memorial Day he took part in the observances, riding in the parade and giving an address at the Town Hall.

Mr. Riley was born in Morton Banks, Yorkshire, England, March 29, 1847, and at the age of 12 moved with his parents to Manchester, Conn. He was but 14 when he began to learn the paper making business, with which his family had been identified in England for several generations. At the age of 16 he enlisted in the Thirty-seventh Massachusetts Infantry, later being transferred to the 20th Regiment of that State, serving until his discharge in August, 1865.

Returning at the close of the war to his trade of paper maker, Mr. Riley learned all of its branches, and in 1881 assumed charge of mills at Lawrence, Mass., going from there to Franklin Falls, N. H., Bellows Falls, Vt., Palmer's Falls and Fort Edwards, N. Y. In January, 1894, he came here to assume entire charge of the mills of the International Paper Company, having eight plants under his jurisdiction. He was later president of the Oxford Paper Company, at Rumford, being associated there with the late Hugh J. Chisholm, and continued as a director for some years after retiring from the presidency. Riley, in the town of Jay, where one of the mills of the International Company is located, was named in his honor. He also was identified with other manufacturing industries at various periods.

Mr. Riley took a great interest in his Grand Army associations, being a past commander of Kimball Post, and serving in various capacities in the Maine Department, which he headed. He was also president of his regimental association, the 37th Massachusetts, in 1929. It was largely through his efforts that the soldiers' monument here was erected.

A Republican in politics, he served as alternate delegate to the National Convention in 1900, when McKinley and Roosevelt were nominated.

Mr. Riley is survived by five children, Fred E., Ralph J. and Harold J. Riley, all of this town, and Mrs. Elmer W. Littlefield of Newtonville, Mass., and Mrs. Charles Ely of Northampton, Mass.; also by ten grandchildren, four great-grandchildren, and a brother, James Riley of Worcester, Mass.

One of his grandsons is F. A. Riley, a prominent member of the Technical Association of the Paper Industry.

Robert E. Staebler

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., June 12, 1933—Robert E. Staebler, aged 62, president and general manager of the Kalamazoo Paper Box Company, former president of the board of education and prominently active in business and industrial activities here was found dead in the basement of the company's plant Saturday afternoon.

Prominent in business circles, active publicly in service to the community as a member of the board of education for six years. and devoted to his family and church affiliations, Mr. Staebler was foremost industrialist and citizen.

The Kalamazoo Paper Box Company was one of the city's foremost industrial plants and was organized in 1906 by Mr. Staebler from what was formerly known as the Kalamazoo Paper Box and Card Company.

Mr. Staebler's activities in business were not confined entirely to the company he organized. At the time of his death he was a director of the Grace Corset Company; a director of the Wolverine Insurance Company of Lansing; a director of the Gibson Company, Inc., makers of stringed musical instruments; vice-president and director of the Fidelity Building and Loan Association of Kalmazoo; and president of the R. E. Staebler Company, distributors of oil burning equipment.

Mr. Staebler was director, vice president and president of the Chamber of Commerce during his ten years' activity in interest in progress in home building and business movements of Kalamazoo. Mr. Staebler, while a member of the board of education was foremost in the active building program which provided Kalamazoo's school children with greater facilities and fine school buildings. He also was an active member of the First Congregational Church for over 25 years.

Mr. Staebler was a member of the Rotary Club, and of the Kalamazoo Lodge No. 22, F. and A. M. He was born in Ann Arbor, Mich., in 1871 and began his successful career in the retail clothing and furnishing business in that city. A widow, Martha C., and two sons, Richard G., and Paul; five grandchildren, and five brothers, J. Fred Staebler, Edward W. Staebler, Albert H. Staebler, Herman J. Staebler, and Walter P. Staebler, all of Ann Arbor, survive.

George W. Sheridan

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 12, 1933.—George W. Sheridan, formerly a sales executive for the Stone & Forsyth Company, of late years a traveling representative for W. H. Claflin & Co., Inc., and well known in the Boston paper trade, died recently at his residence, West Newton, Mass., aged 54. Mr. Sheridan had been in poor health for some time. In early life, he started with Stone & Forsyth Company, becoming a salesman and eventually in charge of the paper bag department. Leaving this firm, after several years, he became representative of the Grand Lake Bag Company, Woodland, Me. He was also in business for himself, buying the Noyes Paper Company, Haverhill, Mass. When the Grand Lake Bag Company was absorbed by the Continental Paper and Bag Corporation, Mr. Sheridan became associated with W. H. Claflin & Co., representatives of that concern. He leaves several children.

H. Alexander Forbes, Jr.

H. Alexander Forbes, Jr., aged 41, of 80 Pleasant street, Holyoke, Mass., advertising manager of the American Writing Paper Company, Inc., died in the Holyoke Hospital June 9 after a short illness. Stricken with appendicitis a week before, Mr. Forbes underwent an operation after which complications set in. Since his arrival in Holyoke fifteen years ago, Mr. Forbes was active in civic affairs. He was prominent in the Kiwanis Club and in amateur theatricals.

Mr. Forbes was born in Brooklyn, N. Y., January 15, 1892, and was graduated from Adelphi Academy in that city. He entered the employ of the brokerage firm of James H. Oliphant & Co., and while with that concern he married Miss Dorothy Fancher, of Yonkers, N. Y., who died in 1930 as a result of burns suffered while she was cleaning a dress in the kitchen of her home.

He joined the U. S. army quartermaster corps in New York City as a private July 15, 1918 and was made a second lieutenat while in service. He was discharged December 5, 1918.

When he first came to Holyoke he was employed by the Crocker-McElwain Company. Twelve years ago he joined the sales force of the American Writing Paper Company, Inc., later changing to the advertising department. Some years ago he succeeded Fred Webster as advertising manager. He was secretary of the Paper Makers Advertising Club and also a member of the Advertising Club of Springfield.

He leaves three children, Phoebe, 13; Duncan, 10, and Audrey, 8; his parents, Mr. and Mrs. Harold A. Forbes, of Brooklyn; four brothers, Charles M., Philip, Kenneth and Richard, all of Brooklyn; and three sisters, Mrs. Brunn Delany, of Larchmont, N. Y., Mrs. S. A. Beebe, of Milwaukee, Wis., and Mrs. Clifford Davis, of Brooklyn.

The funeral was held at St. Paul's Church, Holyoke, on Monday afternoon, June 12, the Rev. Franklin Knight officiating.

Wilfred C. McLaughlin

CINCINNATI, Ohio, June 10, 1933.—Wilfred C. McLaughlin, formerly of this city, a director of the Chatfield & Woods Company and the Chatfield Paper Corporation, died suddenly today in Detroit, where he went in February to resume the general managership of the Union Paper and Twine Company, a Chatfield & Woods Company subsidiary. His age was 51.

Mr. McLaughlin was a member of the executive committee of the National Paper Trade Association. He joined the Chatfield company in 1922. He frequently took long hunting and fishing trips. He was a member of the Cincinnati Club, the Hyde Park Blues and the Detroit Athletic Club. Surviving are a widow, two daughters, Lucille C. McLaughlin, an instructor in Mount Holyoke College, and Mary McLaughlin; and a son, Wilfred C. Jr.

Edward N. Gray

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 19.—Edward N. Gray, formerly associated with John Carter & Co., Inc., died June 14 at the Baker Memorial Hospital where he had been a patient only a few days. He had been in ill health almost a year.

Mr. Gray was born in Jamaica Plain, the son of William H. and Sarah (Libby) Gray. For some time in his early adult years he was assistant city passenger agent for the Boston & Albany Railroad. Later he associated himself with John Carter & Co., Inc.

A wife, who was Elizabeth Fort, of Charlestown, and a sister, Miss Ellen Gray, of Brookline, Mass., are living.

Walter C. Bailey

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., June 19, 1933.—After an illness of about five weeks, Walter Conard Bailey, Sr., president of Reyburn Manufacturing Company, makers of paper tags, of 32d and Allegheny Avenue, died at his home, "Green Acres," Greenwood Avenue, Wyncote, Pa. He was 63 years of age.

Charles S. Reyburn, together with Mr. Bailey, founded the Reyburn Manufacturing Company in 1890. Mr. Bailey succeeded Mr. Reyburn as President upon his retirement five or six years ago. His passing is deeply lamented by his host of friends in the trade. Interment was in West Laurel Hill Cemetery. W. C. Bailey, Jr., will succeed his father as President.

New York Trade Jottings

Henry Elias & Co., general paper merchants, announce the removal of their office and warehouse to 211 East 12th street, New York. The new telephone numbers are Algonquin 4-3850 and 3851.

* * *

A. Allan Silverton has opened offices in the Fifth Avenue Building, 200 Fifth Avenue, New York, to deal in rags and waste paper. His telephone number is Gramercy 5-4230.

* * *

John J. Zima, of the News Print Service Bureau, graduated from the New York Institute of Accountancy and Commerce on May 24. The exercises were held at the Little Theatre, West Side Y.M.C.A., New York.

* * *

C. M. Connor, of the Glassine Paper Company, West Conshohocken, Pa., has been accepted by the Joint Committee on Approved Pulp Testing Chemists, with headquarters at 370 Lexington Avenue, New York, as an approved mill pulp testing chemist, and is listed as such, effective June 16.

* * *

The *New York Times* prints an item concerning the *Harvard Crimson*, wherein Herman Leonard Bogart was elected to the board as assistant managing editor. This position eventually evolves to managing editor and the president. The *Harvard Crimson* has the unique distinction of having had on its board Franklin Delano Roosevelt, President of the United States, Dr. Conant, the new president of the University, and many other prominent men, such as Thomas Lamont and his son, of banking fame. Herman Leonard Bogart is the son of Leonard H. Bogart, of the Milton Paper Company, New York.

* * *

The Twentieth Annual Convention of the National Association of Waste Material Dealers, Inc., embracing many divisions and affiliated associations, will be held at the Hotel Sherman, Chicago on August 7, 8 and 9. The same well-thought-out program that was to have been carried out had the convention been held as originally scheduled in March will be carried out at the August meetings, and in addition there will be the big problem of ways and means of fully cooperating with the government in applying and carrying out in the waste material industry the provisions of the National Industrial Recovery Act. Members of the association, their employees and members of their families will be able to attend the Convention under the Identification Plan which will make it possible for those attending, to purchase a round-trip ticket to Chicago for thirty days with the privilege of stop-overs, at a total cost of a fare and a third. The Century of Progress now open in Chicago makes that city an ideal place for a convention and indications are that the attendance at the Convention will be larger than for many years.

Book Paper Manufacturers Meet

CHICAGO, Ill., June 19, 1933.—The book paper industry met at the Drake Hotel, Chicago, on June 15, and began an effort to do its share in putting its own house in order. Book executives from all parts of the country, including the east and west coasts, attended the session. Sidney L. Wilson, who is engaged in coordinating the various branches of the industry under an expanded American Paper and Pulp Association, was present at the book paper session. The provisions of the Industrial Recovery Act were reviewed and discussed.

PRESIDENT SIGNS THE NATIONAL RECOVERY ACT

(Continued from page 9)

tion in or affecting interstate or foreign commerce shall be deemed an unfair method of competition in commerce within the meaning of the Federal Trade Commission Act, as amended; but nothing in this title shall be construed to impair the powers of the Federal Trade Commission under such Act, as amended.

(c) The several district courts of the United States are hereby invested with jurisdiction to prevent and restrain violations of any code of fair competition approved under this title; and it shall be the duty of the several district attorneys of the United States, in their respective districts, under the direction of the Attorney General, to institute proceedings in equity to prevent and restrain such violations.

(d) Upon his own motion, or if complaint is made to the President that abuses inimical to the public interest and contrary to the public herein declared that prevalent in any trade or industry or subdivision thereof, and if no code of fair competition therefor has theretofore been approved by the President, the President, after such public notice and hearing as he shall specify, may prescribe and approve a code of fair competition for such trade or industry or subdivision thereof, which shall have the same effect as a code of fair competition approved by the President under subsection (a) of this section.

(e) On his own motion, or if any labor organization, or any trade or industrial organization, association, or group, which has compiled with the provisions of this title, shall make complaint to the President that any article or articles are being imported into the United States in substantial quantities or increasing ratio to domestic production of any competitive article or articles and on such terms or under such conditions as to render ineffective or seriously to endanger the maintenance of any code or agreement under this title, the President may cause an immediate investigation to be made by the United States Tariff Commission, which shall give precedence to investigations under this subsection, and if, after such investigation and such public notice and hearing as he shall specify, the President shall find the existence of such facts, he shall, in order to effectuate the policy of this title, direct that the article or articles concerned shall be permitted entry into the United States only upon such terms and conditions and subject to the payment of such fees and to such limitations in the total quantity which may be imported (in the course of any specified period or periods) as he shall find it necessary to prescribe in order that the entry thereof shall not render or tend to render ineffective any code or agreement made under this title. In order to enforce any limitations imposed on the total quantity of imports, in any specified period or periods, of any article or articles under this subsection, the President may forbid the importation of such article or articles unless the importer shall have first obtained from the Secretary of the Treasury a license pursuant to such regulations as the President may prescribe. Upon information of any action by the President under this subsection the Secretary of the Treasury shall, through the proper officers, permit entry of the article or articles specified only upon such terms and conditions and subject to such fees, to such limitations in the quantity which may be imported, and to such requirements of license, as the President shall have directed. The decision of the President as to facts shall be conclusive. Any condition or limitation of entry under this subsection shall continue in effect until the President shall find and inform the Secretary of the Treasury that the conditions which led to the imposition of such condition or limitation upon entry no longer exists.

(f) When a code of fair competition has been approved or prescribed by the President under this title, any violation of any provision thereof in any transaction in or affecting interstate or foreign commerce shall be a misdemeanor and upon conviction thereof an offender shall be fined not more than $500 for each offense, and each day such violation continues shall be deemed a separate offense.

Agreements and Licenses

SEC. 4. (a) The President is authorized to enter into agreements with, and to approve voluntary agreements between and among, persons engaged in a trade or industry, labor organizations, and trade or industrial organizations, associations, or groups, relating to any trade or industry, if in his judgment such agreements will aid in effectuating the policy of this title with respect to transactions in or affecting interstate or foreign commerce, and will be consistent with the requirements of clause (2) of subsection (a) of section 3 for a code of fair competition.

(b) Whenever the President shall find that destructive wage or price cutting or other activities contrary to the policy of this title are being practiced in any trade or industry or any subdivision thereof, and, after such public notice and hearing as he shall specify, shall find it essential to license business enterprises in order to make effective a code of fair competition or an agreement under this title or otherwise to effectuate the policy of this title, and shall publicly so announce, no person shall, after a date fixed in such announcement, engage in or carry on any business, in or affecting interstate or foreign commerce, specified in such announcement, unless he shall have first obtained a license issued pursuant to such regulations as the President shall prescribe. The President may suspend or revoke any such license, after due notice and opportunity for hearing, for violations of the terms or conditions thereof. Any order of the President suspending or revoking any such license shall be final if in accordance with law. Any person who, without such a license or in violation of any condition thereof, carries on any such business for which a license is so required, shall, upon conviction thereof, be fined not more than $500, or imprisoned not more than six months, or both, and each day such violation continues shall be deemed a separate offense. Notwithstanding the provisions of section 2 (c), this subsection shall cease to be in effect at the expiration of one year after the date of enactment of this Act or sooner if the President shall by proclamation or the Congress shall by joint resolution declare that the emergency recognized by section 1 has ended.

SEC. 5. While this title is in effect (or in the case of a license, while section 4 (a) is in effect) and for sixty days thereafter, any code, agreement, or license approved, prescribed, or issued and in effect under this title, and any action complying with the provisions thereof taken during such period, shall be exempt from the provisions of the antitrust laws of the United States.

Nothing in this Act, and no regulation thereunder, shall prevent an individual from pursuing the vocation of manual labor and selling or trading the products thereof; nor shall anything in this Act, or regulation thereunder, prevent anyone from marketing or trading the produce of his farm.

Limitations Upon Application of Title

SEC. 6. (a) No trade or industrial association or group shall be eligible to receive the benefit of the provisions of this title until it files with the President a statement containing such information relating to the activities of the

association or group as the President shall by regulation prescribe.

(b) The President is authorized to prescribe rules and regulations designed to insure that any organization availing itself of the benefits of this title shall be truly representative of the trade or industry or subdivision thereof represented by such organization. Any organization violating any such rule or regulation shall cease to be entitled to the benefits of this title.

(c) Upon the request of the President, the Federal Trade Commission shall make such investigations as may be necessary to enable the President to carry out the provisions of this title, and for such purposes the Commission shall have all the powers vested in it with respect of investigations under the Federal Trade Commission Act, as amended.

SEC. 7. (a) Every code of fair competition, agreement, and license approved, prescribed, or issued under this title shall contain the following conditions: (1) That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents, in the designation of such representatives or in self-organization or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection; (2) that no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing, or assisting a labor organization of his own choosing; and (3) that employers shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment, approved or prescribed by the President.

(b) The President shall so far as practicable afford every opportunity to employers and employees in any trade or industry or subdivision thereof with respect to which the conditions referred to in clauses (1) and (2) of subsection (a) prevail, to establish by mutual agreement, the standards as to maximum hours of labor, minimum rates of pay, and such other conditions of employment as may be necessary in such trade or industry or subdivision thereof to effectuate the policy of this title; and the standards established in such agreements, when approved by the President, shall have the same effect as a code of fair competition, approved by the President under subsection (a) of section 3.

(c) Where no such mutual agreement has been approved by the President he may investigate the labor practices, policies, wages, hours of labor, and conditions of employment in such trade or industry or subdivision thereof; and upon the basis of such investigations, and after such hearings as the President finds advisable, he is authorized to prescribe a limited code of fair competition fixing such maximum hours of labor, minimum rates of pay, and other conditions of employment in the trade or industry or subdivision thereof investigated as he finds to be necessary to effectuate the policy of this title, which shall have the same effect as a code of fair competition approved by the President under subsection (a) of section 3. The President may differentiate according to experience and skill of the employees affected and according to the locality of employment; but no attempt shall be made to introduce any classification according to the nature of the work involved which might tend to set a maximum as well as a minimum wage.

(d) As used in this title, the term "person" includes any individual, partnership, association, trust, or corporation; and the terms "interstate and foreign commerce" and "interstate or foreign commerce" include, except where otherwise indicated, trade or commerce among the several States and with foreign nations, or between the District of Columbia or any Territory of the United States and any State, Territory, or foreign nation, or between any insular possessions or other places under the jurisdiction of the United States, or between any such possession or place and any State or Territory of the United States or the District of Columbia or any foreign nation, or within the District of Columbia or any Territory or any insular possession or other place under the jurisdiction of the United States.

Application of Agricultural Adjustment Act

SEC. 8. (a) This title shall not be construed to repeal or modify any of the provisions of title I of the Act entitled "An Act to relieve the existing national economic emergency by increasing agricultural purchasing power, to raise revenue for extraordinary expenses incurred by reason of such emergency, to provide emergency relief with respect to agricultural indebtedness, to provide for the orderly liquidation of joint-stock land banks, and for other purposes", approved May 12, 1933; and such title I of said Act approved May 12, 1933, may for all purposes be hereafter referred to as the "Agricultural Adjustment Act."

(b) The President may, in his discretion, in order to avoid conflicts in the administration of the Agricultural Adjustment Act and this title, delegate any of his functions and powers under this title with respect to trades, industries, or subdivisions thereof which are engaged in the handling of any agricultural commodity or product thereof, or of any competing commodity or product thereof, to the Secretary of Agriculture.

Oil Regulation

SEC. 9. (a) The President is further authorized to initiate before the Interstate Commerce Commission proceedings necessary to prescribe regulations to control the operations of oil pipe lines and to fix reasonable, compensatory rates for the transportation of petroleum and its products by pipe lines, and the Interstate Commerce Commission shall grant preference to the hearings and determination of such cases.

(b) The President is authorized to institute proceedings to divorce from any holding company any pipe-line company controlled by such holding company which pipe-line company by unfair practices or by exorbitant rates in the transportation of petroleum or its products tends to create a monopoly.

(c) The President is authorized to prohibit the transportation in interstate and foreign commerce of petroleum and the products thereof produced or withdrawn from storage in excess of the amount permitted to be produced or withdrawn from storage by any State law or valid regulation or order prescribed thereunder, by any board, commission, officer, or other duly authorized agency of a State. Any violation of any order of the President issued under the provisions of this subsection shall be punishable by fine of not to exceed $1,000, or imprisonment for not to exceed six months, or both.

Rules and Regulations

SEC. 10. (a) The President is authorized to prescribe such rules and regulations as may be necessary to carry out the purposes of this title, and fees for licenses and for filing codes of fair competition and agreements, and any violation of any such rule or regulation shall be punishable by fine of not to exceed $500, or imprisonment for not to exceed six months, or both.

(b) The President may from time to time cancel or modify any order, approval, license, rule, or regulation issued under this title; and each agreement, code of fair competition, or license approved, prescribed, or issued under this title shall contain an express provision to that effect.

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Dallas, Tex.—The Pollock Paper and Box Company, 2236 South Lamar street, manufacturer of paper boxes and containers, etc., has approved plans for construction of new one-story addition, 40 x 200 feet, and will begin superstructure at once. General contract has been let to the Cedrick Burgher Construction Company, Dallas. New unit will cost about $20,000, with equipment. R. O. Jameson, Southwest Life Building, is engineer.

Atlantic City, N. J.—The Imperial Paper and Bag Company, recently organized by Charles Shusterman, 412 Grammercy place, and associates, with capital of 2,500 shares of stock, no par value, plans operation of local plant for manufacture of paper bags and containers.

Cincinnati, Ohio—The Container Corporation of America, Inc., 5500 Eastern avenue, manufacture of paper and paperboard boxes, containers, etc., will proceed with extensions and improvements in power house at local plant. Contracts for equipment are being let, including boilers to the Foster-Wheeler Corporation, New York; stokers, to Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pa.; and coal-handling equipment to the Webster Manufacturing Company, Chicago. Work is estimated to cost over $65,000, with equipment. Headquarters of company are at 111 West Washington street, Chicago.

St. Louis, Mo.—The Orchard Paper Company, 1113 South 12th street, has concluded arrangements for acquisition of former plant of the Atlas Tack Corporation, Union boulevard and Margaretta avenue, and is said to be planning to occupy at early date for expansion. Improvements will be made.

Newark, Del.—National Vulcanized Fibre Company, East Wilmington, Del., is planning early resumption of operations at one of its mills in this vicinity, closed for about a year past. It is expected to reinstate about 50 employes for initial production, to be increased in near future. Company has been advancing working time at different plants and increasing working quotas. With continuance of improved conditions, it is expected to have all mills on a full time schedule in near future.

Oaks, Pa.—The Synthane Corporation, Oaks, near Philadelphia, manufacturer of fiber products, is running on a full time production schedule at local mill, with employment of sizable working force. It is proposed to hold to present basis for an indefinite period.

Winchester, Va.—The Shenandoah Paper Board Company, Inc., recently organized with a capital of $100,000, as previously reported in these columns, will take over and succeed to the Shenandoah Boxboard Corporation, manufacturer of boxboard specialties, test liners, etc. An expansion program is planned in future, with additional facilities for increased capacity. The new organization will adopt a 24-hour production schedule, divided into three 8-hour shifts. Former officials of the Shenandoah Boxboard Corporation head the new company; N. H. Carpenter, Jr., will be president, and W. H. Redlieu, vice-president and secretary. N. H. Carpenter, Sr., will be active in new organization.

Minerva, Ohio—The Minerva Wax Paper Products Company has adopted a full capacity schedule in all departments, giving employment to large working force. Present basis of output will be maintained for an indefinite period.

Los Angeles, Cal.—Los Angeles Paper Manufacturing Company, 1633 San Pablo street, manufacturer of heavy paper stocks for roofing, flooring, car lining, etc., has plans for a new one-story addition, 40 x 50 feet, for storage and distributing service, and will proceed with work at once. Blaine Noice, 5436 Carlton way, is engineer.

New Companies, Etc.

Detroit, Mich.—The Globe Paper Company has been incorporated with a capital of $100,000, to manufacture and deal in paper products. Joseph E. Johnston, 235 West Jefferson avenue, is principal incorporator and representative.

New York, N. Y.—The United States Marking Tag Company, Inc., has been organized with capital of 100 shares of stock, no par value, to manufacture paper tags, labels and allied commercial paper goods. The incorporators include P. Vincent Landi, 166-A Lee avenue, and Samuel Binder, 3021 Avenue I, both Brooklyn, N. Y.

Raleigh, N. C.—The Capital City Paper Company has been incorporated with a capital of $50,000, to manufacture and deal in paper products of various kinds. The incorporators are J. Baxter Johnson and J. P. Baker, Raleigh.

Buffalo, N. Y.—Buffalo Cellulose, Inc., has been chartered with nominal capital of $3000, to manufacture and deal in cellulose products. The incorporators are F. Taylor Root and D. Rumsey Wheeler, Liberty Bank Building, Buffalo.

Highlands, N. J.—Smack Manufacturing & Publishing Company has been organized with capital of 3000 shares of stock, no par value, to operate a local paper converting plant for the manufacture of cardboard products, jig saw puzzles, etc. The incorporators include Cyril A. Smack and Paul J. Adair, Highlands. William L. Parker, 214 Bay avenue, Highlands, is representative.

Detroit, Mich.—The City Paper Stock Company, Inc., has filed notice of company dissolution under state laws.

Chicago, Ill.—Arthur E. Wilson & Company, Room 1845, 120 South LaSalle street, has been chartered with nominal capital of $1000, to deal in paper products of various kinds. Arthur E. Wilson and Henry F. Tenney are incorporators.

PAPER TRADE JOURNAL

ESTABLISHED 1872

Published at 34 North Crystal Street, East Stroudsburg, Pa. Executive and Editorial Offices, 15 West 47th St., New York, N. Y.

Henry J. Berger
Editor

Ronald G. Macdonald
Editor Technical Section

Herbert J. Laughton
Associate Editor

Thomas J. Burke, C. A.
Editor Cost Section

Lynne M. Lamm,
Washington Correspondent

Price, Per Copy, 10 Cents — United States, Per Annum, $4.00
Canada, including tax, $7.50; Foreign Countries in Postal Union, $6.00

Member Audit Bureau of Circulations

Vol. XCVI New York, June 22, 1933 No. 25

This publication is now and always has been printed on paper made in the U. S. A.

CONGRESS PASSES INDUSTRIAL CONTROL BILL AND ADJOURNS

The curtain was rung down last week on the intensely absorbing drama which has been enacted at Washington since the early part of March. Congress has adjourned. Probably never in the history of the nation have so many bills of vital interest to the people been passed in such a brief time. The President remained master of the situation to the end, every measure which he proposed to Congress to meet the grave emergency in which the country finds itself having been passed substantially as he wanted it. He retains the confidence of the country as a competent leader.

Of the most immediate importance undoubtedly to the paper industry of all the legislation passed is the National Industrial Control Act which was signed by President Roosevelt on Friday and which is reprinted in full elsewhere in this issue of the PAPER TRADE JOURNAL. The purposes of the legislation are "to promote the organization of industry for the purpose of cooperative action among trade groups, to induce and maintain united action of labor and management under adequate governmental sanction and supervision, to eliminate unfair competitive practices, to reduce and relieve unemployment, to improve standards of labor, and otherwise to rehabilitate industry and to conserve natural resources."

As may be seen from a study of the bill, perhaps the most important feature in its application will be to determine what is "price." Regarding this, Ernst & Ernst, the well-known accountants and auditors, say that the answer to an industry's question "What is price?" must wait upon the answer to the question "What is cost?" Price, in general, is the sum of wages, depreciation, depletion and profit, but it seems to be little understood, or inconsistently observed in times past. "Cost" more specifically means the cost of all direct labor, cost of all direct materials, all direct expense, and all overhead expense. Space does not permit a complete definition of cost in this discussion, but a summary of the elements which enter into it may be helpful to those who are now compelled to do some thinking on this subject.

The term "direct labor" means wages paid for the labor directly performed upon the work undertaken or upon the component parts of the articles or things produced.

The term "direct material" means the cost of raw materials and purchased component parts entering directly into the work undertaken or into the articles or things produced, and where specifications call for special packages or containers, the cost of such packages or containers. The cost of direct materials is the invoice cost less any trade discounts, plus duty and import expenses, freight, express and drayage. In a number of industries, a separate overhead or handling expense is added to the material cost where expenses can be definitely allocated more logically to the material than to the direct labor or included in the machine hour rates.

The term "direct expenses" means expenses of any nature which appertain directly to the work undertaken or the articles or things produced, such as the traveling and other field expenses occasioned by and solely in connection with a specific project; engineering; professional services; plans and drawings for a specific project, and the expenses involved in the testing of installed apparatus.

The term "overhead expense" as applied to manufacturing cost means expenses pertaining to and necessary in connection with the work undertaken, or the article or thing produced, and which are not properly chargeable to "direct labor," "direct materials," or "direct expense" and which are applicable to two or more simultaneous or successive projects or lots manufactured within an accounting period. It includes supervision, indirect or unproductive labor, operating supplies, fuel, light, heat, power, small tools, water, insurance, depreciation, engineering, factory management and general plant expense, cost and time keeping, purchasing, safety work, fire prevention, property taxes and a portion of the general administration expense of the enterprise.

Included in Overhead Expense, but classified as a separate cost of doing business, are the General Administration and Selling Expenses, which include those expenses incidental to the general management, financial and selling functions of the business. It includes salaries of officers and executives, traveling, legal and professional services, subscriptions, membership fees and dues, advertising, commissions, salesmen's salaries and expenses.

It is essential to define those expenditures which constitute additions to assets and those which apply as a charge of current manufacturing and operating expense and to establish uniform rates of depreciation on all types of buildings, machinery and equipment.

"Cost" is a thing of parts, and unless the parts are carefully analyzed and applied in the costing process, the cost

results developed may be misleading. The total cost of doing business and the net profit or loss resulting from the operating of a business as a whole, is easily determined by very simple or casual methods of bookkeeping. Industry generally has been too well satisfied with casual bookkeeping; it has been considered too much as a necessary evil. Cost accounting and analysis of cost have been neglected probably because they were considered something to be attended to after the pressure from other problems had been relieved. There must be a wide departure from ordinary bookkeeping routine where two or more sizes, kinds, styles, of qualities or products are manufactured in a plant or where there is a diversity of equipment, departments, and processes involved in the manufacture.

In an industry comprised of ten or more companies, it will be rarely found that any two of them will compute their cost in all of its elements in the same uniform manner. This, in the past, has been the cause of much confusion and has defeated the attempts to make satisfactory comparison of costs, and will continue to be the stumbling block in arriving at any conclusion as to "What is Cost."

Uniform system of cost accounting will not make for uniform cost results, no matter how uniformly the principles and the routine of the systems are observed by the individual companies which constitute all or the major portion of an industry. Type of building and equipment used, local tax assessments and tax rates, the quality of organization and personnel, ability to control variable expense, and other factors all make for variations in the cost results of different companies in the same industry. Uniform accounting, however, will show where and why such variations exist, and provide a means for a determination of the policies and practices that should govern in the application of many phases of a code of fair competition. There must be uniformity in the treatment of all elements. The routine must necessarily follow well defined lines. When the language of cost is spoken, it must be one that is understood by all concerned.

As distinguished from actual cost, outlined in the preceding, there is also the standard, or model, or ideal cost which will be a helpful guide in many industries in the determination of what is a fair price and which at the same time can be used as a basis for checking practices during the period in which the act will be a controlling factor in industry. This question will loom up larger in many minds than "What is actual cost?" Such standard or ideal costs for a unit or industry reflect the cost at which an article should be produced in well managed plants operating at a given rate of capacity and involve acceptance of some basis which expresses the degree of utilization of plant capacity.

Mosinee Mills Get Refund

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 14, 1933—The Bureau of Internal Revenue has announced refund of taxes for 1918 amounting to $45,949.35 to the Wausau Sulphite Fibre Company (now the Mosinee Paper Mills Company) of Mosinee, Wis., for overassessment of income and profits taxes.

A. Thomson Reports Improvement

[FROM OUR REGULAR CORRESPONDENT]

DAYTON, Ohio., June 19, 1933—That business "is better along all lines" was the encouraging word given out by Alexander Thomson, president of the Champion Coated Paper Company, this week at his office in Hamilton.

Mr. Thomson spoke not only as the head of the plant in Hamilton but as chairman of the board of directors of the Champion Fibre Company, Canton, N. C., a subsidiary of the parent concern.

"There are no especially large orders on hand at the present time," said Mr. Thomson, but smaller orders have been received steadily. This makes a healthier condition than if we were receiving unusually big orders, but few of them."

The Hamilton mills have been run regularly during the depression, at times with a smaller force, but always running, which is saying something industrially.

Mr. Thomson gave out his rather brief, but encouraging statement, on the occasion of the annual meetings of the stockholders of the parent firm and the subsidiary held during the past week in the Miami Valley.

Mr. Thomson was elected president of the Champion Coated Paper Company; Logan C. Thomson was named vice-president and general manager; Herbert W. Suter, vice-president; W. Scott Zoller, secretary-treasurer; and J. L. Henson, assistant secretary-treasurer.

Officers as follows were chosen by the Champion Fibre Company: Alexander Thomson, chairman of the Board of Directors; R. B. Robertson, president and general manager; Logan C. Thompson, vice-president; H. W. Suter, vice-president; C. S. Bryant, secretary-treasurer; Scott Zoller, assistant treasurer, and W. J. Damtoft, assistant secretary.

To Take Over Cushnoc Paper Plant

[FROM OUR REGULAR CORRESPONDENT]

AUGUSTA, Me., June 20, 1933.—Incorporation of the Cushnoc Operating Company, of this city, with a capital stock of $50,000, has been approved by the Attorney General's department. While the articles of incorporation set forth that the company is to engage in general manufacturing and trading, the understanding is that its real purpose is to take over and operate the Cushnoc Paper Company, located here in Augusta.

No statement as to the correctness of this has been forthcoming, though it is admitted by those connected with the company. It is further understood that the tentative plan of those interested is to take over the plant under a lease, to run for a considerable period of years.

Officers of the company are Horace A. Sheesley of Portland, president, and Wilfred E. Hall of Augusta, treasurer.

The Cushnoc Paper Company is one of the old papermaking concerns of the State. It has been in difficulties for some time as a result of the general business slump, which has seriously affected all pulp and paper making concerns.

Bids for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., June 21, 1933.—The Government Printing Office has received the following bids for 520,000 pounds of manila and green tag board; Barton, Duer & Koch Paper Company, at $6.25 Cwt. for manila and $7.00 for greeen; Perkins-Goodwin Company, at $5.60 for manila and $6.10 for green.

CASEIN

(DOMESTIC & IMPORTED)

We have recently completed a new casein plant at Warners, N. J. and are now in position to serve you from this additional shipping point.

OTHER PAPER CHEMICALS

ROSIN SIZE
(Dry—Liquid)
SATIN WHITE
SULPHATE OF ALUMINA
(Commercial—Iron free)
ENGLISH CHINA CLAY
SALT CAKE
WAXINE SIZE
ALWAX SIZES
TAPIOCA FLOUR
SAGO FLOUR

AMERICAN CYANAMID & CHEMICAL CORPORATION

535 FIFTH AVENUE · NEW YORK

Section of the
Technical Association of the Pulp and Paper Industry
Edited by Ronald G. Macdonald, Secretary

Anticipating Maintenance Expense by Proper Inspection*

By E. E. Berry[1]

The matter of observing the utility and operating results of equipment in the field is a very interesting subject for the machinery manufacturer. It very often happens that machinery of identical design and operating under similar conditions will give excellent results in one mill and fail in another. In some cases this can be easily attributed to faulty workmanship or defective materials, but in the majority of the instances it is due to the difference in the care and attention that the equipment receives. A very interesting discussion of this subject with your Chairman several months ago resulted in the suggestion that perhaps a frank discussion of the machinery builder's observations in this respect would be of interest to this convention and also prove of mutual benefit.

Mechanical Failures

I believe that causes from mechanical failures of mill equipment can be divided into the following classifications:

1. Faulty design, including use of wrong materials, improper distribution of materials, insufficient mass and strength, making parts inaccessible for easy inspection, improper protection from intrusion of moisture and foreign substances and lack of provision for proper lubrication.
2. Defective materials.
3. Faulty workmanship in manufacture of the equipment.
4. Failure of manufacturer to furnish mill with detailed operating instructions.
5. Lack of attention to proper lubrication, including use of cheap lubricants and use of lubricants not having proper characteristics for the purpose.
6. Failure of mill to give equipment proper inspection and maintenance.

I shall discuss these several classifications in order mentioned and in some instances offer suggestions for bettering the present condition.

The modern paper machine presents to the designing engineer some very difficult problems. These problems will be generally appreciated when consideration is given to the very remarkable increase in operating speeds and widths of machines during a comparatively few years. This increase in speeds and widths has taken place so rapidly that the designer has had little guidance from operating experience and in addition is unable to test thoroughly the equipment before placing it in actual operation. In this respect a comparison with the automobile is very interesting. The average life expectancy of an automobile is very little, if any, more than the service imposed on the bearings and other parts of a modern high speed paper machine during one year's operation. The automotive engineer is able to test thoroughly new models under actual operating conditions and by continuous driving at high speeds and in the course of a few weeks subjects the mechanism to as much work as it will be called upon to do during its entire useful life. All of this testing is completed and resulting changes made in design and again tested before the model is entered into production or distributed to the consuming public. This same procedure is possible with a large percentage of the equipment in a paper mill, other than the paper machine proper, and is true with most of the miscellaneous machines that service our daily lives.

There is no practical way of testing the mechanical parts that enter into a paper machine before it is placed in actual service. The expected life of a paper machine is so long and the duty so severe that several years of experience with actual service must be had, and operating results carefully followed to be of much value to the designing engineer. This all means that each change in design has to be most carefully studied and every effort made to have the engineering as nearly perfect as possible. This also means that as we are all human and make mistakes and that as long as changes in design are made, with the resulting progress in increased speeds and larger production, we will always be confronted with some failures due to the engineer's inability to foresee and provide against all of the elements involved. I only mention these facts briefly for the purpose of bringing to your attention some of the problems the designer is up against and wish to add that my company is doing everything possible to anticipate changes in design by engineering these, also new ideas far in advance of giving them to the mills for actual service. This procedure gives us more time to study the design from every angle and in every case possible. The new

* Presented at the annual meeting of the American Pulp and Paper Mill Superintendents Association, Green Bay, Wis., June 8-10, 1933.

[1] Beloit Iron Works, Beloit, Wis.

mechanisms are given both shop tests and paper mill service before being offered to the industry in general.

In this connection it might be proper to add that we have taken advantage of the present slack in business and have designed complete new paper machine sections embodying all of the experience gained from years of closely following the results of our equipment in the field and employing the latest in materials and engineering practice. We are ready for the expected upturn in business and many of the designs for individual parts and sub-assemblies are being used in modernizing of old machines, this constituting a large percentage of our business at the present time. This procedure, however, can only be applied to the unit parts of the machine as practically every installation is different and it follows that necessarily most of the engineering will always take place after it has been decided to make the installation and a large part of this engineering must always be without precedent or actual operating experience as a guide.

It may be of interest to mention here that the great advancement made in metallurgical science during the past two or three years, and which is crystallizing at the present time, will greatly benefit paper machine design of the future. It might also be interesting to say that the tremendous amount of data that has been collected from actual operation of high speed machines during the past few years will do much to bring the future machine to a very high degree of mechanical perfection.

Defective materials from hidden flaws have always presented a very serious problem to the machinery manufacturer. No matter how careful the inspection, it has been impossible to detect these hidden flaws, which many times greatly reduce or entirely eliminate the large strength factor of safety that has been provided. Again advancement of science has been of great assistance to the designing engineer by providing more dependable manufacturing methods, also new metal alloys that are less subject to flaws and even providing the X-ray that makes it possible to see through many inches of metal and clearly defining the hidden defects. As fast as possible these new methods of detecting defective materials are being properly utilized and will go far toward eliminating mechanical failure of machinery placed in service from now on.

New Standards of Construction

Present high operating speeds have brought about requirements for precision workmanship that a few years ago would have been considered as bordering on the ridiculous. The modern high speed machine has thousands of places where it is necessary to hold the machined dimensions to a variation of less than .001 inch and many more thousands of places where this variation must be kept within .002 inch. The builder has met this requirement by installation of new precision machine tool equipment and precision measuring devices, as well as a greatly increased inspection force of highly trained men. In addition, it has been necessary to school the machine tool operators and, in fact, the whole organization to think and work to these precision requirements. Much has been done by Beloit in this direction, with the result that we have very few mechanical failures in the field that can be attributed to faulty workmanship, but there again the human element enters and where this is a factor the best of equipment and the most thorough inspection will not prevent an occasional error reaching the field.

The old machine only required the simplest of open type construction. The modern high speed heavy duty machine consists of precision made parts tightly enclosed for proper protection from the elements and hidden from sight. As a vivid illustration of this, compare the old core gear drive with the modern hypoid or spiral bevel enclosed unit. As many of you here present will testify very seldom does the modern drive get out of order and if given proper lubrication and occasionally a little attention, will provide for many years of trouble-free service. However, if for one reason or another, something does happen to one of these drives, I believe we all agree that to make adjustments and correction requires a much higher degree of mechanical skill than in case of the old open core gear drive. Drive units have been used to make this comparison, but the same difference holds true throughout the design of the paper machine proper.

I contend for these reasons, if for no other, that the care and maintenance of all paper mill equipment should be placed in the hands of the most skilled mechanics, men who are anxious and capable of knowing all about the hidden construction and how to proceed with adjustments if and when required. I wish to say here that even men of this ability require and should receive all possible assistance from the machinery builder in the way of detailed instructions covering proper operation and care of the equipment. In this respect, I must frankly admit that the builders have been shamefully negligent in the past. This is a matter that has recently been given much attention by Beloit and I am pleased to say that a large part of our product is now covered by such instructions and that this work will be completed in the very near future. For the mills to gain the most these instructions must be handled systematically and placed in the hands of capable men. Unless systematically handled, it is very often found that they do not reach those most interested and then again when changes are made in personnel they are often not handed down to the new men that follow. I believe that most machinery builders are now making a sincere effort to accompany their product with instructions on proper care and operation and that by the time this work is completed the mills as a general thing will have organized to gain the most possible benefit from this information.

Importance of Lubrication

Careful analysis of reported mechanical failures from the mills reveal that a very large percentage are either due to lack of lubrication or the use of lubricants of improper characteristics, and in many cases the use of low grade cheap lubricants entirely unsuitable for the purpose. We have known of cases where equipment has stood up for many years with proper lubrication and inspection has revealed it to be in excellent condition and apparently good for an indefinite period of service. Then shortly thereafter failures start to take place and inspection brings out the fact that in an effort to save in operation cost a cheaper grade of lubricant has been put in service. It is surprising to find that in many instances this change has been made without knowledge or consultation with the operating personnel. Many instances of this nature have come to my attention and the most of these have proven to be rather expensive with a cost running many times the small amount that might have been saved, by the use of the cheaper and lower grade lubricant.

The matter of proper lubrication and use of correct lubricants for different parts of the machine is a subject all by itself and I understand is to be covered by a paper before this convention. I will say, however, that this very important matter is receiving much attention by Beloit. We are working with a number of the outstanding and dependable oil companies and will in the near future specify the proper lubricant for each moving part of our product

that requires lubrication. These specifications will include the products of a sufficient number of oil companies to give the mill a good selective list, regardless of the section of the country involved. We will endeavor to keep these lists up to date and in this way give the mills the benefit of improvements made by the oil companies and it is interesting to know that many such improvements are being made at the present time.

Before passing on, it might prove of interest to know about a few things that we are doing to provide our product for proper lubrication and in this way assist in further reducing operating maintenance expenditures. When antifriction bearings were first applied to paper machines they were all specified to be lubricated with grease. Oil has been generally recognized as better for this service, as it flows more freely to all surfaces, also creates less friction and actual contents of the bearings are more readily determined. Grease, however, is much easier to retain, also offers greater sealing resistance to the intrusion of moisture and foreign matter. With grease it has been impossible to develop a practical device to determine the contents of the bearing, with the result that many bearings have failed from an over-supply, as well as from lack of lubrication. We have now been able to develop a mechanical seal that not only retains the oil within the bearing, but also prevents intrusion of foreign substances from the outside. These new designs are provided with visible oil level, also a drain which makes it much easier to give them proper care and attention.

In closing on the subject of lubrication, I wish to say that from close observation it is my belief that very few mills give this very important matter the dignity that it deserves. Surprisingly often the oiling is found to be in the hands of men entirely incapable of understanding the mechanics and requirements of modern machinery and I will go even farther and say machinery of any kind, either old or new. It would seem that very seldom have the oilers been selected due to their capabilities for the work, but more often to find an easy job for some old employee who has become physically unfit to continue his work in some other department and often his past work has been physical rather than of a mechanical nature. I am sure that the most economical results cannot be expected from such procedure and that much can be accomplished in the way of lowering maintenance expense by bettering the personnel in direct supervision of this important work.

Inspection and Early Repairs Important

The old proverb that "a stitch in time saves nine" is very applicable to the proper maintenance of machinery. It is not possible, however, to make the stitch in time unless we know that it is required and to know this we must have the work of inspecting our equipment in the hands of men who are alert, enthusiastic, and capable. It is realized that preventive inspection will not prevent all shut-downs and loss of production from failures of equipment due to faulty workmanship and materials or from being poorly engineered, but it is contended that such inspection will go a long way in this direction and will practically eliminate such losses from that part of the equipment that has reached the highest degree of mechanical perfection. A child may be born with defective organisms which, if discovered early and with the aid of science, will live a long, healthful, and useful life. On the other hand, the most healthful child may die early from exposure and lack of care. Many are the bearings that could have been saved if only their lack of lubrication could have been discovered a little sooner. Loose parts wear rapidly and break, also allow for vibration which causes wear and breakage of co-acting parts and many a shut-down could have been prevented by a few minutes' use of a wrench.

I believe we all realize the importance of preventive inspection and the question is, how can it be brought about in an economical way. It is probable that no set plan can be evolved that will fit every mill organization, but with your permission I will outline a general set-up arrived at from knowledge of different plans in practice in many mills and added to by thoughts of my own.

1. Every machine in the mill is to be assigned a number; in case of machines having a multiplicity of parts, such as a paper machine proper, every bearing and roll or sub-assembly or, in fact, any part that is liable to require inspection or maintenance is to be assigned an identifying symbol or number in addition to the identifying number for the machine proper. Some mills already have this all or partly in effect. This is to be accomplished for the purpose of identifying and properly recording the inspectors' reports and the posting of the cost of the work done on these parts.

2. A set of index cards is to be provided and properly filed, with each machine or sub part to have a card bearing its identifying number. These cards should be arranged to tie in with the cost department system and used for noting the work done on the part, as well as the cost of this work and the date it took place. Many other notes of future interest can be posted on these cards, such as date when part was last carefully inspected, also amount of lost time when repairs have been made. These records will prove to be of great value should failures continue by helping to determine what the future attitude should be toward the repairing of the part involved.

3. Many mills combine the job of oiling and wiping the machinery. It is suggested that these two jobs be completely divorced and the job of lubricating and inspecting combined and given the title of equipment inspector. To take care of this job the best mechanics available would be selected and compensated accordingly, as well as every possible effort made to add dignity to the work. If each tour now has an oiler, each would be preferably replaced with men of this selection, but in every case the man in charge of this work during the day tour would be the most capable to be obtained. These men would not only provide for proper lubrication, but as they did so they would be on a constant lookout and capable of unearthing mechanical troubles that might be expected from reasons other than from lack of lubrication. These men would circulate about the mill and would soon lay out a routine that would mean that every piece of equipment would be inspected and cared for as often as the circumstances might require.

They would be provided with reporting blanks on which they would make a written report of the important happenings during their time of duty. In making their reports they would use the symbols or numbers that have been assigned to the machines or machine parts. These reports, together with proper cooperation with the maintenance department, would aid materially in planning and scheduling of repair work.

These men would be selected for their mechanical ability, loyalty, ambition, alertness (mentally and physically), and in every case they should have good senses of sight, hearing, smell, and touch. Bearings that are noisy and rough, the smell of hot oil, whining gears, loose parts, misaligned rolls, shafts and bearings, and all similar things that are the beginning of most failures will not escape the attention of capable mechanics having these other charac-

teristics. Good mechanics cannot endure such things and cannot rest in peace until correction has been made.

I anticipate that your first impression will be that to institute a plan of an equipment inspection along the lines suggested would be too expensive to operate. Men having these capabilities cannot be had at the same rate that most mills are now paying to the men supervising the lubrication of their equipment, but it is contended that this difference will be infinitesimal in comparison with the savings that will be realized in maintenance expense alone, to say nothing of the savings from increased production by greatly reducing the time lost for making repairs and adjustments. Men with these capabilities would make many small adjustments while the machines were running and which now do not receive attention until damage has taken place. It is further believed that a well systematized preventive inspection plan will pay big returns even in the smallest of mills, but probably could be laid out on a much less elaborate scale than required for the larger mills. In the small mill it is possible that these duties might be added to those of the master mechanics.

The equipment inspectors should be supplied with all the data obtainable on the operation and care, as well as the construction of the machinery under their care. Until they are perfectly familiar with the construction they should in every case assist in making all major repairs and adjustments.

Capable Men Needed for Maintenance Work

To gain the most from this plan the personnel of the maintenance department should be built up until all members are the most capable mechanics obtainable and placed under a capable foreman.

The matter of properly maintaining equipment is not confined to the paper mills, but is something constantly before all manufacturing establishments using machinery. It may be interesting to take our own problems in this respect as an illustration. Our machinery is made up of many units that are very small in comparison with the paper machine, but nevertheless, they must be kept in the best of repair in order to turn out precision work. During the years when we were busy night and day and ever being pressed for deliveries, the time lost for making repairs, the holding up of deliveries and the tremendous loss from scrappage of parts by your inspectors, due to the machine tools being out of order, were subjects given much discussion.

When business slacked off this was one of the first things that we investigated. For many years we have kept a card system, recording the cost and nature of repairs made to each tool. A careful study of these records quickly revealed that the maintenance expense of a number of machines over a period of two or three years was a very large percentage of the cost of new replacement equipment. This has resulted in our replacing many of our machine tools and other equipment since that time.

Further investigation quickly brought to light that part of the men in care of maintaining our machine tools were entirely incapable of assuming this important work and it was necessary to make several changes and switching around of personnel to correct this condition. This work is now under a capable foreman of exceptional mechanical ability and a capable staff of assistants.

After throwing out the tools that the repair records showed as too expensive to keep and replacing these with new equipment, we started systematically to overhaul all of the remaining equipment. Every machine in our factory has been taken down and repaired and those that could not be put in condition to turn out precision work have been replaced. In this respect, as well as in anticipating our engineering problems, we are ready for any upturn in business.

With this work completed for about a year, it is very gratifying to see our maintenance expense and scrappage of machine parts per man hour running only a small fraction of what it did before these changes were put into effect and I am sure that we are prepared to keep this expense in its present low ratio, even during the most busy times that can be anticipated. I am just as sure that the mills can realize like savings by installing a systematic plan of preventive inspection and maintenance under the supervision of the most capable men obtainable.

It is only by close cooperation between the builder and the user that mill equipment can be brought to mechanical perfection. I wish to thank the many of you here who have so greatly assisted us in this respect. I sincerely hope that you will continue to report mechanical troubles and suggestions for correction. We appreciate receiving reports on the minor, as well as the major troubles, as we realize that without this information it is impossible for us to bring our product to the degree of perfection that we have set as a goal.

I also wish to thank the many of you who have so greatly assisted Beloit with its many new designs of equipment brought out during the past few years. After all is said, the design of paper mill machinery is a matter of cooperative effort between the user and the builder. I hope that this cooperation will persist and that we may have the pleasure of working with you many times in the future.

Power Plant Reports*

Incomplete information and nonuniform data are two of the most common characteristics of plant operation, both leading to uneconomical operation or inefficient design.

About two years ago, a suggestion was advanced which has resulted in your sub-committee making a search for and establishing a proposed set of forms for power plant operators to use in analyzing and reporting results of operation and for comparing their results with those of other plants.

While there can be numerous contingent benefits secured from intelligent methods of reporting operation, the primary objects which led to the assembly of these forms are to:

1. Provide a guide by means of which managers and operators can obtain a comprehensive understanding of power plant operation and cost.
2. Provide a common means by which the operation and cost of one plant may be compared with another.

In attempting to satisfy these requirements, certain other benefits are automatically secured.

a. The basic elements such as fuel, labor, operating efficiency, costs of operation and maintenance are made available. By comparison with previous operations of the same plant or with operations of other plants, a measure of economy is obtained which may lead to improvement.

* Presented at the annual meeting of the Technical Association of the Pulp and Paper Industry, New York, N. Y., February 13-16, 1933.
These report forms have been approved by the TAPPI Heat and Power Committee as tentative standard recommended practices.

b. Unit use factors and costs give a ready means of measuring the characteristics of the plant and its economy with reference to the product of the plant and the product of the mill which it serves.
c. A means of comparing the relative merits of fundamental design and operation is secured.
d. By an interchange of data, advancement in design and operation become readily available.
e. A broad experience which can serve to establish relative merits or disadvantages will become available in a short period of time, and act as a guide in the construction of new plants or revisions and additions to existing plants.

Two forms are submitted herewith.

The Standard Power Plant Report is primarily for use by the person in charge of the power plant and for conveying to the mill manager, the results of his power plant operation. It presupposes an accounting system of plant products,—power and heat and of cost of operation, maintenance and fixed charges. It goes into detail sufficiently to permit finding the main causes of inefficiency and expense but leaves more complete analysis to a closer investigation which would only be warranted when losses became noticeable. It contains only those conclusions which can immediately be drawn from fundamental data.

The Comparison report is based on the fundamental data assembled in the Standard Power Plant Report. It is largely devoted to conclusions which can be drawn from the more detailed report, and is, therefore, of particular interest to the mill management. It may also be used as a basis of comparison with other plants from which general conclusions can be derived without excessive detail. If a closer analogy is required, the comparison can be made from the Standard Power Plant Report form.

In submitting these forms to the association, your committee makes the following recommendations:

1. That the two reports be adopted as standards for use by association members.
2. That association members proceed to use them as supplements to or in place of present forms in order that
   (a) Data may begin to accumulate.
   (b) Experience tending toward improvement in the forms may be gained.
   (c) Benefits may accrue to themselves and to others.
3. That the association appoint a suitable group of members to collect from members both reports at intervals not exceeding four weeks duration and issue a comparison report of contributing plants using the comparison form as a vehicle under the following regulations.

   The technical data so collected and issued will be made available to the association at large.

Circulation of cost data within the group of contributing plants becomes a mutual agreement upon presentation of the data to the committee appointed by the association for the collection of the same.

The cost data so collected and issued will be made available to the association at large except that any contributing plant may, at their own discretion, decline to permit such publication except when averaged with other plants of like characteristics.

The committee will designate plants reporting in a classified manner but so as not to disclose the name or specific location of the plant. Contributing plants may permit their identity to be disclosed upon submission of reasons for desiring same and names of persons to whom same is to be submitted.

The spirit of this endeavor is mutual cooperation for mutual benefit.

A. G. Darling, Chairman,
Sub-Committee on Production and
Transmission of Heat and Power.

T. A. P. P. I. STANDARD POWER PLANT REPORT

Name of company .....
Name of plant .....
Location of plant .....
Approved by .....

For period of.....weeks ending.....day .....month.....year.

Section A—Mill Production

Part I.	**Pulp mill (oven-dry basis)**	
1.	Production of ground wood pulp	Tons per day
2.	Production of sulphate pulp	Tons per day
3.	Production of sulphite pulp	Tons per day
4.	Production of soda pulp	Tons per day
Part II.	**Paper mill (oven-dry basis)**	
10.	Production of machine finished paper	Tons per day
11.	Production of supercalendered paper	Tons per day
12.	Production of coated paper	Tons per day

Section B—Steam

Part I.	**Production (from and at 212 deg. F.)**	
100.	Boiler surface at —— avg. pounds gauge	sq. ft.
101.	Boiler surface at —— avg. pounds gauge	sq. ft.
102.	Superheater surface at —— deg. F.	sq. ft.
103.	Superheater surface at —— deg. F.	sq. ft.
104.	Feed water temp.	deg. F.
105.	Condensate temp.	deg. F.
106.	Make-up in per cent total feed water	per cent
107.	Cooling water temperature	deg. F.
108.	Net steam-pwr. and procs.	thous. pounds
109.	Net steam-pwr. and procs. in per cent gross	per cent
110.	Maximum 15 minute demand	thous. pounds
111.	Boiler capacity factor	per cent
112.	Boiler load factor	per cent
113.	Boiler effic. (banking included)	per cent
114.	Boiler effic. (banking excluded)	per cent
115.	Heat value coal fuel as fired	B.t.u. per pound
116.	Heat value —— fuel as fired	B.t.u. per ——
117.	Heat value coal fuel dry	B.t.u. per pound
118.	Total coal fuel consumed	net tons
119.	Total —— fuel consumed	net ——
120.	Total million B.t.u. in fuel as fired	——
Part II.	**Cost**	
200.	Cost of coal fuel per ton as fired	$——
201.	Cost of —— fuel per —— as fired	$——
202.	Cost of coal fuel per mil. B.t.u. as fired	$——
203.	Cost of —— fuel per mil. B.t.u. as fired	$——
204.	Total cost of fuel	$——
205.	Total cost of water, auxiliaries, etc.	$——
206.	Total cost of labor	$——
207.	Total cost of miscl. oper. labor	$——
208.	Total cost of maintenance	$——
209.	Total cost of depreciation	$——
210.	Total cost of interest, insurance, taxes	$——
211.	Total of steam (excl. interest)	$——
212.	Total of net steam per 1,000 pounds (coal fuel)	$——
213.	Total of net steam per 1,000 pounds (—— fuel)	$——
214.	Total of net steam per 1,000 pounds, total	$——
215.	Total of net steam per million B.t.u.	$——

Section C—Electric Power

Part I. Production

Steam Electric Power

300.	Turbine kw. condensing	kw.
301.	Turbine kw. extrac. condensing	kw.
302.	Turbine kw. non-condens.	kw.
303.	Turbine kw. extra non-condens.	kw.
304.	Max. 15-min. demand	kw.
305.	Generator capacity factor	per cent
306.	Generator load factor	per cent
307.	Power factor—avg.	per cent
308.	Million pounds net steam condens. oper.	——
309.	Million pounds net steam non-conden. oper.	——
310.	Million pounds net steam total power	——
311.	Thousand kw-hr. gen. condens.	——
312.	Thousand kw-hr. gen. non-condens.	——
313.	Total kw-hr. gen.	——
314.	Net kw-hr. in per cent of kw-hr. gen.	——

Hydro Electric Power

400.	Waterwheel capacity	kw.
401.	Net head	ft.
402.	Max. 15-min. demand at mill	kw.
403.	Kw-hr. deliv. at mill	1000 kw-hr.
404.	Kw-hr. deliv. in per cent of kw-hr. gen. per mill	per cent
405.	Generator capacity factor per mill	per cent
406.	Generator load factor per mill	per cent
407.	Power factor avg.	per cent

Purchased Power

500.	Substation (transformer) capacity	k.v.a.
501.	Purchased power	1000 kw-hr.
502.	Purchased power max. 15-min. demand	kw.

Consolidated Power

600.	Total net consol. power	1000 kw-hr.
601.	Total net max. 15-min. demand	kw.

PART II. COST

Steam Electric Power

700. Cost of steam to power (B.t.u. basis) ..... $——
701. Cost of water, auxiliaries, etc. ..... $——
702. Cost of labor ..... $——
703. Miscel. oper. expense ..... $——
704. Cost of maintenance ..... $——
705. Cost of depreciation ..... $——
706. Cost of interest, insurance, taxes ..... $——
707. Cost of power (excl. interest) ..... $——

Hydro Electric Power

800. Cost of operating supplies ..... $——
801. Cost of operating labor ..... $——
802. Cost of maintenance ..... $——
803. Cost of depreciation ..... $——
804. Cost of interest, insurance, taxes ..... $——
805. Cost of power (excl. interest) ..... $——

Purchased Electric Power

900. Cost of purchased power ..... $——

Consolidated Electric Power

1000. Cost of net consol. power ..... $——

Section D—Mechanical Power

PART I. PRODUCTION

Steam Mechanical Power

1100. Steam engines—condensing ..... h.p.
1101. Steam engines—non-condensing ..... h.p.
1102. Turbines—condensing ..... h.p.
1103. Turbines—non-condensing ..... h.p.
1104. Net steam to engines and turbines ..... 1000 pounds
1105. Total engine and turbine output ..... h.p.-hrs.

Hydro Mechanical Power

1200. Waterwheel capacity ..... h.p.
1201. Net head ..... feet
1202. Total hydro-mechanical power ..... h.p.-hrs.

Consolidated Mechanical Power

1300. Total consolidated power ..... 1000 h.p.-hrs.

PART II. COST

Steam Mechanical Power

1400. Cost of steam to power (B.t.u. basis) ..... $——
1401. Cost of water, auxiliaries, etc. ..... $——
1402. Cost of labor ..... $——
1403. Cost of miscellaneous oper. expense ..... $——
1404. Cost of maintenance ..... $——
1405. Cost of depreciation ..... $——
1406. Cost of interest, insurance, taxes ..... $——
1407. Cost of power (excl. interest) ..... $——

Hydro Mechanical Power

1500. Cost of operating supplies ..... $——
1501. Cost of operating labor ..... $——
1502. Cost of maintenance ..... $——
1503. Cost of depreciation ..... $——
1504. Cost of interest, insurance, taxes ..... $——
1505. Cost of power (excl. interest) ..... $——

Consolidated Mechanical Power

1600. Cost of net consolidated power ..... $——

Section E—Total Electric and Mechanical Power

PART I. PRODUCTION (1 H.P.-HR. = .746 × 1 KW-HR.)

1700. Total power ..... 1000 h.p.-hr.
1701. Total power per ton pulp ..... h.p.-hr.
1702. Total power per ton paper ..... h.p.-hr.
1703. Total power per ton total product ..... h.p.-hr.

PART II. COST (EXCLUSIVE OF INTEREST)

1800. Total cost of power ..... $——
1801. Total cost of power per ton pulp ..... $——
1802. Total cost of power per ton paper ..... $——
1803. Total cost of power per ton total product ..... $——

Section F—Process and Heating Steam

PART I. CONSUMPTION

1900. Steam to process at —— pounds per sq. in. ..... 1000 pounds
1901. Steam to process at —— pounds per sq. in. ..... 1000 pounds
1902. Heated space ..... 1000 cu. ft.
1903. Steam to bldg. heat at —— pounds per sq. in. ..... 1000 pounds

PART II. COST

2000. Cost of steam to process (B.t.u. basis) ..... $——

T. A. P. P. I. COMPARISON REPORT POWER PLANTS

Name of company .....
Name of plant .....
Location of plant .....
Approved by .....

For period of.....weeks ending.....day .....month.....year.

Section A—Mill Production

PART I. PULP MILL (OVEN-DRY BASIS)

1. Production of ground wood pulp ..... Tons per day
2. Production of sulphate pulp ..... Tons per day
3. Production of sulphite pulp ..... Tons per day
4. Production of soda pulp ..... Tons per day
5. Production of all pulp ..... Tons per day

PART II. PAPER MILL (OVEN-DRY BASIS)

10. Production of machine finished paper ..... Tons per day
11. Production of supercalendered paper ..... Tons per day
12. Production of coated paper ..... Tons per day
13. Production of all paper ..... Tons per day

Section B—Steam

PART I. PRODUCTION

100. Heat value coal fuel as fired ..... B.t.u. per pound
101. Heat value —— fuel as fired ..... B.t.u. per ——
102. Fuel per ton of product ..... mil. B.t.u.
103. B.t.u. net steam per ton of product ..... mil. B.t.u.
104. Net steam (F & A 212 deg.) per ton of pulp ..... pounds
105. Net steam (F & A 212 deg.) per ton of paper ..... pounds
106. Net steam (F & A 212 deg.) per ton of total product ..... pounds

PART II. COST (EXCLUSIVE OF INTEREST)

200. Cost of coal fuel per million B.t.u. as fired ..... $——
201. Cost of —— fuel per million B.t.u. as fired ..... $——
202. Cost of net steam per 1000 pounds ..... $——
203. Cost of net steam per ton of pulp ..... $——
204. Cost of net steam per ton of paper ..... $——
205. Cost of net steam per ton of total product ..... $——

Section C—Electric Power

PART I. PRODUCTION

Steam Electric Power

300. Net steam per kw-hr. gener. condens. ..... pounds
301. Net steam per kw-hr. gener. non-condens. ..... pounds
302. Net steam per kw-hr. gener. total ..... pounds
303. Net steam per kw-hr. gener. condens. ..... 1000 B.t.u. per kw-hr.
304. Net steam per kw-hr. gener. non-condens... 1000 B.t.u. per kw-hr.
305. Net steam per kw-hr. gener. total ..... 1000 B.t.u. per kw-hr.

Hydro Electric Power

400. Power delivered at mill ..... 1000 kw-hr.

Purchased Electric Power

500. Power delivered at mill ..... 1000 kw-hr.

Consolidated Electric Power

600. Total consol. power ..... 1000 kw-hr.
601. Max. 15-min. demand total ..... kw.
602. Total kw-hr. per ton pulp ..... kw-hr.
603. Total kw-hr per ton paper ..... kw-hr.
604. Total kw-hr. per ton total product ..... kw-hr.

PART II. COST (EXCLUSIVE OF INTEREST)

700. Steam electric power—cost per kw-hr. ..... $——
800. Hydro electric power—cost per kw-hr. ..... $——
900. Purchased electric power—cost per kw-hr. ..... $——
1000. Consolidated electric power—cost per kw-hr. ..... $——
1001. Cost of electric power per ton pulp ..... $——
1002. Cost of electric power per ton paper ..... $——
1003. Cost of electric power per ton total product ..... $——

Section D—Mechanical Power

PART I. PRODUCTION

Steam Mechanical Power

1100. Net steam to power per h.p.-hr. ..... 1000 B.t.u. per h.p.-hr.
1101. Total steam mechanical power ..... 1000 h.p.-hr.
1102. H.P.-hrs. per ton pulp ..... h.p.-hr.
1103. H.P.-hrs per ton paper ..... h.p.-hr.
1104. H.P.-hrs. per ton total product ..... h.p.-hr.

Hydro Mechanical Power

1200. Overall hydraulic efficiency ..... per cent
1201. Total hydro-mechanical power ..... 1000 h.p.-hr.
1202. H.P.-hrs. per ton pulp ..... h.p.-hr.
1203. H.P.-hrs. per ton paper ..... h.p.-hr.
1204. H.P.-hrs. per ton total product ..... h.p.-hr.

Consolidated Mechanical Power

1300. H.P.-hrs. per ton pulp ..... h.p.-hr.
1301. H.P.-hrs. per ton paper ..... h.p.-hr.
1302. H.P.-hrs. per ton total product ..... h.p.-hr.

PART II. COST (EXCLUSIVE OF INTEREST)

Steam Mechanical Power

1400. Cost per h.p.-hr. ..... $——
1401. Cost per ton pulp ..... $——
1402. Cost per ton paper ..... $——
1403. Cost per ton total product ..... $——

Hydro Mechanical Power

1500. Cost per h.p.-hr. ..... $——
1501. Cost per ton pulp ..... $——
1502. Cost per ton paper ..... $——
1503. Cost per ton total product ..... $——

Consolidated Mechanical Power

1600. Cost per h.p.-hr. ..... $——
1601. Cost per ton pulp ..... $——
1602. Cost per ton paper ..... $——
1603. Cost per ton total product ..... $——

Section E—Total Electric and Mechanical Power

PART I. PRODUCTION (1 H.P.-HR. = .746 × 1 KW-HR.)

1700. Total power ..... 1000 h.p.-hr.
1701. Total power per ton pulp ..... h.p.-hr.
1702. Total power per ton paper ..... h.p.-hr.
1703. Total power per ton total product ..... h.p.-hr.

PART II. COST (EXCLUSIVE OF INTEREST)

1800. Total cost of power ..... $——
1801. Total cost of power per ton pulp ..... $——
1802. Total cost of power per ton paper ..... $——
1803. Total cost of power per ton total product ..... $——

Section F—Process and Heating Steam

PART I. CONSUMPTION

1900. Million B.t.u. to process per ton pulp ..... B.t.u.
1901. Million B.t.u. to process per ton paper ..... B.t.u.
1902. Million B.t.u. to process per ton total product ..... B.t.u.
1903. Million B.t.u. per cu. ft. per day for period covered ..... B.t.u.
1904. 1000 B.t.u. to bldg. heat per ton total product .....

PART II. COST (EXCLUSIVE OF INTEREST)

2000. Process steam—cost per ton pulp ..... $——
2001. Process steam—cost per ton paper ..... $——
2002. Process steam—cost per ton total product ..... $——
2003. Bldg. heat—cost per ton total product ..... $——
2004. Bldg. heat—cost per cu. ft. space per day for period covered $——

Constant Tension Regulator on Reels and Unwinding Stands*

By Roscoe H. Smith[1]

Last fall at the Duluth meeting of the American Pulp & Paper Mill Superintendents Association, the writer discussed "Electric Drives for Paper Winders." At some previous meetings other engineers of our company have described the "Supercalender and Winder and Sectional Paper Machine Drives." Those papers dealt with well established and proven equipments of which many are in service. At this time, I wish to present for consideration and discussion an account of the advantages that can be gained by adopting to paper mill requirements a constant tension regulator of the rotative element type which already is being used successfully in other industries, this regulator automatically controlling tension in the winding or unwinding of a web of material.

The need for a practical, reliable device of this sort is obvious upon consideration of the shortcomings of the conventional mechanical arrangements which are in common use for developing tension. On unwinding stands one uses friction blocks or friction bands with water-cooling apparatus for these frictional elements on high speed, wide machines. On shaft winders or reels the slip-friction clutches and slipping belts are regularly employed. Such equipments usually require the frequent attention of the operators to continually make adjustment for the changing diameter of the reel, and between adjustments the actual tension produced in the web increases with every layer of paper removed or added as the case may be. Furthermore as each adjustment is made there is nothing definite upon which the operator can rely by way of indicating the tension produced. He must depend upon his judgment and skill in watching the web, and it is slight wonder that widely divergent conditions exist during different "shifts" throughout the day.

The condition of friction surfaces may vary considerably during a single run, particularly if newly replaced. The effect of this sometimes is not apparent until the work is done.

Maintaining proper tension at backstands is essential to good results in supercalendering and winding particularly where shipping rolls are being produced. Poor regulation of backstand tension on drum winders may show up as unevenness in the roll, or welts.

Other objections to mechanical frictions are the waste of power resulting from sliding surfaces, the high maintenance due to replacements of worn out parts, and the space occupied by the levers, tie-rods, and links which bring the means of adjustment to the operator's position.

The trend toward higher speed operations of supercalenders and winders accentuates all of the difficulties which are being encountered at present speeds.

I will describe how this tension regulator is applied with the electric drives for these purposes and then explain the principle upon which it operates.

In the case of winding paper on reels or shaft winders, a complete electric drive would consist of an adjustable speed direct current motor connected to the roll shaft; the tension regulator; an operator's panel with rheostat, ammeter, and pushbuttons; a controller, and a source of direct current.

The adjustable speed motor shall have a range of shunt field speed variation sufficient to cover the ratio of the diameter of full roll to diameter of empty core. Its capacity shall be sufficient to produce the maximum tension desired plus the load of the bearings on the winder shaft.

$$\text{H. P.} = \frac{\text{Tension} \times \text{Feet Per Min.}}{33{,}000} \text{ Plus H. P.}$$

The operator's rheostat is supplied for the purpose of selecting the tensions desired for different weights and grades. The direct current supply shall be a variable voltage responding to or responsible for the linear speed of the paper being delivered by the preceding machine.

At the start of winding a new roll the motor accelerates the roll shaft to a high speed and the regulator assumes control of the motor so as to steadily reduce its speed as the roll builds up layer by layer at the same time governing the current drawn by the motor according to whatever tension setting the operator has selected.

The electrical equipment for an unwinding stand would consist of a direct current generator with shunt fields; the tension regulator; an operator's panel with rheostat, ammeter and push buttons; a controller, and a circuit to absorb the direct current power developed by the generator. This generator is mechanically connected to the shaft of the unwinding stand and as it rotates due to the paper being unwound it develops voltage. By being connected to a circuit on which that voltage can be impressed and cause current to flow, energy is absorbed and that energy is produced by the resulting tension in the webb of paper which causes the generator to revolve. The regulator functions as a governor to throttle the energy developed to correspond to the operator's selection of the tension desired. As the roll unwinds and its shaft rotates faster and faster the regulator weakens the shunt field of the generator, keeping the voltage produced at a constant value.

Thus far in the description the application appears reasonably simple, but one naturally wonders what complications are involved in the regulator and whether such a sensitive unit can be of rugged mill design. Simplicity and reliability are notable in the unit. It consists of a sturdy, commutator type rheostat mounted with a torque motor. This torque motor has two opposing armature windings. One of these is connected in series with a variable resistance across a constant voltage excitation circuit. This winding is spoken of as the "spring winding." The other is connected in series with the armature of the motor or generator being governed, or in the case of large power drives, it is shunted across a resistance unit in that armature circuit. This latter winding is called the "torque winding." The opposing forces of the two windings create angular movement in one or the other direction unless they exactly balance. The arm of a rheostat controlling the shunt field of the motor or generator is mounted on the shaft of this regulator and any angular movement produces a change in the shunt field current of the governed machine

* Presented at the annual meeting of the American Pulp and Paper Mill Superintendents Association, Green Bay, Wis., June 8-10, 1933.

[1] Reliance Electric and Engineering Company.

which in turn causes a change in the armature current bringing about a balance of torque between the "spring" and the "torque" windings of the regulator. This action can be easily understood by considering two identical motors, mechanically coupled and wired so that one tends to run in the opposite direction to the other; as long as the same voltage is applied to both motors the same amount of current will flow in both and the torque produced will exactly balance. If anything is done to cause more current to flow in one of the motors its torque will exceed that of the other and rotation will occur. However, if that rotation moves a rheostat so as to bring the current in the first motor back to the same value as the current in the second, the angular movement, will cease. Throughout the winding of a roll the current in the "torque" winding will just slightly exceed that in the "spring" winding causing a very slow steady movement of the rheostat arm as the roll builds up layer by layer. The regulator rheostat has as many as 200 steps so that a slight movement of the arm causes a small increment of change in the shunt field of the motor or generator being governed. This feature contrasts with the action of other types of regulators used in this work in which each movement caused by a change in the main circuit tends to effect an extreme change in the shunt field, the effect of which is perceptible near the upper and lower limits of the speed range, with those equipments which I have studied.

The regulator fits the situation by virtue of the fact that in winding or unwinding paper at a constant tension, the energy in horsepower or kilowatts remains constant throughout the entire change in roll diameter. It is obvious in winding at any given constant linear speed that as the roll diameter increases, the roll speed in revolutions per minute decreases, since

$$\text{Linear Speed in F.P.M.} = \pi \times \text{Diameter in Feet} \times \text{R.P.M.}$$

In order to keep the tension in the web of paper constant the torque applied at the roll shaft must increase as the diameter increases.

$$\text{Torque} = \frac{\text{Diameter}}{2} \times \text{Tension}$$

Therefore the product of torque and speed in R.P.M. is also a constant. But, also

$$\frac{\text{Torque} \times \text{Speed}}{5250} = \text{H. P.}$$

which explains the relation of constant tension to constant horsepower.

By a similar deduction, it can be readily determined that for any given constant linear speed, if the energy produced by the unwinding of a roll is kept at a constant value in kilowatts, the tension causing it to unwind likewise remains constant.

In the electric motor or generator as the case may be, energy corresponds to the product of voltage and current. If we first arrange for the voltage to bear a fixed relationship to our linear speed, then the action of the regulator in holding the current constant will result in keeping the tension in the webb constant.

As the linear speed of the sheet in feet per minute is increased or decreased, the voltage is changed accordingly, and the regulator, by keeping the current at the same value as before will maintain the same tension or pull in the sheet. The ammeter on the operator's panel indicates that current, and therefore serves as a relative indicator of tension regardless of the speed at which the material is being handled.

If the operator purposely changes the setting of the rheostat on the operator's panel, this changes the torque produced in the "spring winding" of the regulator so that the value of current in the "torque winding" which will just overcome the former is likewise changed and a new value of tension is obtained.

The ordinary adjustments at the operator's panel permit selecting values of tension from over a considerable range. The actual regulation of tension is so close to the theoretical constant that the slight fluctuations which occur are not perceptible.

The following is a typical electrical backstand tension equipment recommended for a 244 inch four-drum winder, to replace an existing water-cooled unwinder. The winder handles rolls as they come from the paper machine, 44 inches diameter on 13¼ inch diameter cores; maximum winding speed 2300 feet per minute; maximum tension to be developed 500 pounds or slightly more than 2 pounds per inch of width.

A.—D.c. generator, special rating with field control for voltage adjustment at 230 volts over speed range of roll shaft, namely 170/680 r.p.m. correspondingly lower speed range and voltage at paper speeds below 2300 f.p.m.

B.—Tension regulator.

C.—Enclosed control panel mounting necessary contactors and relays.

D.—Operator's panel mounting; ammeter to indicate relative tension; rheostat for selecting tension desired; push button station for controlling generator contactors.

The winder in question is equipped with a Reliance four-motor variable voltage drive supplied through Moore & White.

Corresponding to the maximum speed of 2300 f.p.m. of the winder, with the maximum diameter of rolls 44 inch wound on a core 13¼ inch diameter, we would have a range of generator speed from 199.5 r.p.m. to 664 r.p.m. We use a generator with a speed range of 170 r.p.m. to 680 r.p.m. field control in order to give the necessary adjustment beyond the limits of speed range of the paper roll itself. This generator, through the contactors and relays, would be connected in parallel with the winder drum motors across the 75 kw. generator on the winder drive and the power developed by it resulting from the unwinding of the rolls would be pumped back into the winder drive circuit. The field of the generator would be excited across the 230-volt d.c. plant excitation.

The control contactors and relays take into account the condition of acceleration and deceleration of the winder and provide for bringing the roll immediately to rest whenever the web between the reel and the winder is broken or whenever a loose end comes by. Whenever the speed of the winder is varied, so that the winder is operating at other speeds than the 2300 f.p.m. mentioned above the arrangement of the generator and regulator automatically adjusts itself to the speed of the winder without requiring attention on the part of the operator, maintaining the same tension in the sheet as called for by the tension regulating rheostat at the operator's panel.

Ordinarily in threading the winder, the lever-operated slip clutch at the backstand is thrown back so that the roll is entirely free from the speed reducer and friction. Then the roll is pushed around by hand and the paper fed through the winder. We understand that with the full diameter roll on the backstand, it is quite a job for the operator to push this roll around during this operation, and if it is desired, our control can readily be arranged so that for threading the winder, this lever-operated slip clutch can be left engaged and our generator can operate as a motor at a very low speed to turn the roll in the un-

winding direction, while the paper is being threaded through the winder.

The equipment eliminated includes the gear unit, friction drum and band and its water-cooling mechanism, also eliminating the rod which runs out connecting the friction band to the operator's pedestal with its adjusting wheel. Likewise, other water connections not shown on the sketch would also be eliminated.

A sketch was made with the assistance of prints from Pusey & Jones, who built the unwinder, to indicate a comparison of space requirements for the water-cooled geared friction unit and for the electrical equipment showing also what present units would be eliminated. This sketch shows the connecting rod and operator's adjusting wheel and other linkages of the present friction unit all above the floor, although the usual arrangement is to have additional linkages and connecting rods by which the mechanism is carried below the floor and across the entire length of the winder, then forward to below the operator's station and up through the floor to a pedestal where the operator's hand wheel is located. All this is eliminated by the electrical equipment. The generator fits into the floor space now occupied by the geared unwinder and the space now taken by the tie-rods and links would not be required.

In this particular case the generator has been selected for direct coupling to the roll shaft without intermediate gears; in many cases for unwinders and reels, it will probably be desirable to introduce gears and the recent developments of gearmotors will work in very nicely. This is particularly so where it is desirable not to have an off-set drive which would interfere with free access by the operators to both sides of the roll. Many of these gearmotors have found their way into the paper mills and the wide approval they are receiving indicates the likelihood of their general acceptance.

Adapting the tension drive to a particular reel or unwinding stand requires taking into consideration the type of electrical or mechanical drive being used to drive the machine with which the reel or stand operates. In most cases some modifications of the present equipment will be necessary. If the machine, as for example, a supercalender with which a reel or shaft winder is to operate has mechanical or alternating current motor, or direct current field control drive, then it will be necessary to couple to the machine a direct current generator to provide the variable voltage responding to the linear speed of the paper. With this must be included a small booster set in order to maintain tension at standstill. If the machine has a variable voltage drive for its entire speed range, the generator in that drive can also be used to supply the reel motor and it will not be necessary to add another to the equipment.

If the drive on the machine gives a quick jerky acceleration it will be necessary to arrange for a smooth even acceleration by some modification of its control equipment.

In the case of an unwinding stand equipment, if the machine with which it operates, as for instance a drum winder, already has a variable voltage drive which provides its entire speed range, the generator or the unwinding stand may deliver the power it develops back into that system. Where some other type of drive is used it will be necessary to connect a direct current motor to the machine of sufficient capacity to receive the energy produced by the backstand generator and convert it into useful work in driving the machine.

A small amount of constant voltage direct current will be required in all cases to provide the current for the "spring winding" of the tension regulator, as well as the excitation of the direct current units in the system.

Advantages of Constant Tension Drive

In closing, let us summarize the advantages that will be derived from the use of a constant tension drive involving the tension regulator.

1. Smooth, even tension throughout the roll.
2. Drive conveniently located and more efficient.
3. Operator free to devote entire attention to handling rolls and other duties.
4. Use of ammeter indicates relative tension and permits reproducing conditions to predetermined specifications.

April News Print Statistics

Production of news print in Canada during April, 1933, amounted to 147,759 tons and shipments to 161,266 tons, according to the News Print Service Bureau. Production in the United States was 74,507 tons and shipments 76,095 tons, making a total United States and Canadian news print production of 222,266 tons and shipments of 237,361 tons. During April, 19,048 tons of news print were made in Newfoundland and 1,179 tons in Mexico, so that the total North American production for the month amounted to 242,493 tons.

The Canadian mills produced 112,599 tons less in the first four months of 1933 than in the first four months of 1932, which was a decrease of 17 per cent. The output in the United States was 80,178 tons or 21 per cent less than for the first four months of 1932, in Newfoundland 8,233 tons or 9 per cent less, and in Mexico 1,094 tons more, making a total decrease of 199,916 tons or 18 per cent.

Stocks of news print paper at Canadian mills are figured at 37,232 tons at the end of April and at United States mills 21,171 tons, making a combined total of 58,403 tons compared with 73,498 tons on March 31, 1933.

Pumping Equipment Compared

The new water filtration plant and pumping station at Highland Park, Ill., described in a paper by Paul Hansen, which has been reprinted by the De Laval Steam Turbine Company, Trenton, N. J., manufacturers of the pumping equipment. An exhaustive comparison was made of the merits of seven different kinds of pumping equipment, including electric motor driven pumps, oil electric drive, oil engine drive, steam turbines in combination with oil engines, steam turbines in combination with motor drive, and two types of steam turbine driven pumps. The lowest cost of pumping is shown by the combination of steam turbine pumps and electric motor driven pumps, although for the conditions of this particular plant, involving capacities ranging from 2 to 6 million gallons per day against 220 ft. head, electric driven pumps alone are a close second, and as the station is located in a high class suburban district where coal handling equipment and chimneys were not desirable, they were selected.

New Dandy Roll

J. J. Plank & Co., Appleton, Wis., have been granted a patent on a new dandy roll. This roll has many new features and advantages. It is made of special flat tape material which assures much freer drainage and does not fill up as fast. A flat winding wire is set on edge which gives more space between the cover and bars. This construction has a tendency to eliminate bar marks and also gives a more rigid roll. Information on this new roll will be gladly furnished by the company.

Technical and Economic Developments in the Field of Non-Fibrous Paper-Making Raw Materials (1932)*

In accordance with the policy of the Non-Fibrous Raw Materials Committee, the committee presents herewith its third annual development report covering items of interest of an economic and technical nature in the field of non-fibrous paper making raw materials which have developed during the calendar year 1932.

General Trends

Quite in keeping with the general economic world trends the major items to be reported in each of the subdivisions covered, convey the general thoughts of a reduction in the cost of raw materials, a depletion of inventories and a contracting volume of sales. In times of stress such as those through which we have been passing, technical efforts are bent along one of two lines. The first is the development of new and more efficient products to replace older lines of commodities, and the second is the bending of efforts on the part of technical departments to increasing operating efficiencies and eliminate wastes in order to reduce production costs to a point compatible with the lower selling prices prevailing by necessity.

Major Items To Be Reported

It is obvious from a review of the technical developments brought to light in this report that most of the technical activity has been concentrated in the efforts to reduce costs. Major items to be reported at this time are as follows—

Casein[1]

The principal feature concerning casein during 1932 was, of course, the general downward trend of prices which reached the lowest point in modern history of casein. Sales were made generally as low as 4¾ cents delivered and in some cases sales were made at much lower figures.

Purchases by consumers were generally made on a hand to mouth basis and during the entire year very little stock was carried.

Because of the very low consumption, the amount of casein produced in the United States was more than sufficient for domestic requirements. It would very naturally be expected that production would fall off because of low prices and there actually was some decrease. However, this decrease was less than expected due to the poor demand and low prices on dry skim milk.

During the last quarter of 1932 dry skim milk prices advanced and a large amount of milk which had been going into casein was diverted to dry milk. This has evidently had some effect on the casein market as prices at the present time are higher and have a firm tone.

As regards Argentine casein, this has been very weak, averaging two to two and one quarter cents per pound, c.i.f. our ports. Under normal conditions the United States imports eight to nine thousand tons of Argentine casein yearly. This year the total importation has been in the neighborhood of one thousand tons. In spite of this loss to the Argentine, they have succeeded in reducing their stocks and at the close of the year cable advices report an increase in price to 3 cents c.i.f. our ports and that stocks are limited and buyers in Buenos Aires are competing for all fresh arrivals.

From a technical viewpoint the most noteworthy development during the year has been the increased study of quality made by consumers. They have met the very severe competition by efforts to improve the quality of their products, and a number of mills have made an intensive study of Casein with the result they have determined the specifications which most suited their conditions. We believe this has been of value not only to consumers but to producers as they have been forced to meet these specifications and as a result have improved their product.

Chlorine and Bleaching Powder[2]

Since the last report on this subject to TAPPI, the Interstate Commerce Commission Regulations for the Transportation by Rail of Explosives and Other Dangerous Articles in Freight, Express and Baggage Services have been amended in par. 431 (b), effective Jan. 20, 1933, to provide that no shipment of chlorine may be made in multiple unit tank cars to any public delivery unless "before car is offered or accepted for transportation, the shipper has obtained from the delivering carrier and filed with originating carrier written permission for such removal." This does not affect delivery on private sidings. This is a safety measure in the interest of all concerned.

An important technical development in 1932 in the use of chlorine in pulp, paper and board mills appears to be the application of chloramine to slimes. Chloramine is replacing chlorine in the treatment and prevention of slimes, because in practice it is found to be more efficacious in most cases. The conditions vary among mills, and the application of chlorine and ammonia as to location and amount is a study at each mill, and the dosage should be carefully measured with ammonia and chlorine apparatus. Slimes are no longer a mystery and a burden. The benefits of the treatment extend far beyond the slimes, embracing as they do the use of closed systems with the resulting savings in material and a lessening of the sewage problem.

Clays and Fillers[3]

The past year witnessed very little change in the clay situation over what it was during the latter part of 1931. Prices remain very much the same, with the exception of prices in imported clays which were very materially effected by the depreciation of foreign currency. The sit-

* Presented at the annual meeting of the Technical Association of the Pulp and Paper Industry, New York, N. Y., February 13-16, 1933.
Prepared by A. C. Dreshfield, chairman Non-Fibrous Raw Materials Committee with the cooperation of the members of that committee.

[1] Prepared by A. E. Regnier, Paper Makers Chemical Corp.

[2] Prepared by Robert T. Baldwin, Chlorine Institute.

[3] Prepared by C. H. Champion, R. T. Vanderbilt Company.

nation for domestic producers has been a very trying one. With paper mill operations at a low point the consumption of clay has been correspondingly low, combined with the extremely low prices has made a situation most unprofitable for the domestic producer.

The most interesting development during 1932 was the use of opaque pigments in paper. Up to the beginning of the year, very little real opaque paper had been manufactured. During 1932, however, opaque pigments of all types have been tried out by many paper manufacturers, with a great many of them becoming steady users of some type of an opaque pigment.

We do not look for a big year in 1933, with every indication that both volume and price will be no better than that of years gone by.

Lime and Limestone[4]

The consumption of lime and limestone by the paper industry during the year 1932 showed a further decrease both in volume and price, no official figures being available as yet. The industry has been so completely demoralized during this past year that it is doubtful whether prices can go any lower. Any improvement in general business during 1933 will almost certainly result in higher prices.

According to figures just published by the United States Bureau of Mines, for the year 1931, the paper industry consumed 286,745 tons of both quick and hydrated lime valued at $1,781,793.00. In 1930 the consumption was 378,721 tons valued at $2,562,232.00.

The 1931 production of lime for all purposes was 2,707,614 tons valued at $18,674,913.00, against 3,387,880 tons valued at $25,616,486.00 for 1930, or a decrease of 20 per cent in volume and 27 per cent in value.

The year just passed produced no radical changes in the application of either lime or limestone in the paper industry. The most notable progress probably occured in bleaching, a two phase process having been successfully developed at several of the larger mills. This process involves an initial treatment with free chlorine, hydrated lime being used to neutralize the acidity, after which the bleaching is completed in the usual way with a calcium hypochlorite liquor.

Interest in the "milk of lime sulphite process" continues to develop, and further changes in this direction should be seen when the long hoped for recovery in business is definitely realized.

The question of freight rates on lime has become further complicated during recent months, and the outlook is most uncertain at the present time. The two factors involved are the so called "Emergency Surcharge Case" and the so called "Fluxing and Agricultural Lime Proceeding" now before the Interstate Commerce Commission under I.C.C. Docket 16170.

The increase on lime due to the surcharge has, generally speaking, been in effect throughout the country on both interstate and state traffic since January 4, 1932. This increase is to expire March 31, 1933 unless it is extended by the Interstate Commerce Commission. While there has to date been no major effort on the part of the railroads to secure an extension, such a move is likely in view of the marked falling off of revenue. The change in administration, which will undoubtedly bring about changes in railroad legislation, further complicates the situation.

A decision in the 16170 case referred to above, handed down in September, 1932, made it unnecessary to certify that shipments of agricultural or fluxing lime were unsuitable for chemical purposes. While this order was aimed at the certification on the bill of lading, the Central Freight Association Carriers took a broader view and decided to establish a dual minimum on all grades of lime, the standard scale subject to a minimum loading of 30,000 pounds, the other scale predicated on 80 per cent of this standard scale subject to a minimum of 50,000 pounds. However, protests by Eastern lime manufacturers, strongly supported by executives of Eastern Carriers, to the effect that this move was not in conformity with the order of the Commission, brought about its withdrawal by the Central Association effective November 15, 1932, making the so called 80 per cent scale subject to a minimum of 50,000 pounds applicable to agricultural or fluxing lime, but without any restriction whatsoever many petitions were filed with the Interstate and State Commissions seeking the suspension of the November 15th change. However, the Interstate Commerce Commission did not see fit to grant the suspension although the State Commission of Ohio and Indiana did suspend the rates within their respective states.

The Ohio proceeding is covered by I. and S. Docket 136, and the Indiana proceeding under P.S.C.I. 11132. The latter is set for a hearing at Indianapolis on January 5, 1933. The date of the Ohio hearing has not been set.

Obviously the situation as it stands today is intolerable. The 80 per cent basis subject to the dual minimum prevails on Indiana and Ohio interstate traffic and lime manufacturers face the possibility of their competitors taking advantage of the situation by using the agricultural or fluxing lime rate on other grades of lime. The ruling of the Interstate Commerce Commission obviating the necessity of certifying that lime shipped under this classification is not suitable for other chemical purposes, of course makes the policing of these shipments by the Inspection Bureau unnecessary.

There is a complaint pending before the Interstate Commerce Commission which involves the rates from Ohio producing points to Eastern Trunk Line territory, but just what action will be taken in the Central Freight Association territory toward rectifying the present situation is problematical and uncertain.

Rosin and Turpentine[5]

During 1932 the laws of "supply and demand" have been the governing factors in the naval stores industry (rosin and turpentine). This is in contrast to 1931 when it will be recalled an attempt was made to sustain prices through the organization of a Naval Stores Marketing Association. During 1931 this association was successful in holding published prices above the level they would naturally have followed during part of the year. This was done by placing bids on the Savannah market at relatively high figures and by accumulating rosin which was kept out of the channels of trade. This accumulation of rosin eventually became so great that the association was forced to cease its activities after which the published rosin market collapsed from figures above $6.00 per 280 pounds to quotations below $3.00. The year 1932 began with a published price of $2.60 per 280 pounds and with excessively high stocks of rosin and turpentine on hand at the ports and at various concentration points.

The presence of these stocks, practically the highest on modern record, together with the failure of the marketing association to benefit permanently the producer, naturally resulted in a very appreciable curtailment in production plans at the start of the year. In many cases the evident impossibility of producing rosin at a profit kept producers from making plans for active operations during

[4] Prepared by O. L. Cook, Lehigh Lime Company.

[5] Prepared by E. F. Turner, Paper Makers Chemical Corp.

1932. The probable decline in production of rosin was variously prophesied at from 20-40 per cent under previous years. Figures would indicate that the actual decline in production during the year 1932 may have been approximately 35 per cent of the previous five-year average.

In normal times such a decline in production would have resulted in a tremendous increase in prices but with the surplus stocks on hand at the start of the year, combined with the abnormally low rate of consumption, prices have been maintained surprisingly steady during the year. As stated above, the year started with a published quotation on "G" gum rosin of $2.60 per 280 pounds Curiously enough the year ended with exactly the same quotation. During the summer months anxiety over foreign quotations caused weakness in nearly all speculative markets, this weakness being reflected in the rosin price trend. "G" rosin reached a low point of $2.10 per 280 pounds which is the lowest quotation on record since 1904. It will be recalled that there was a small boom in the stock market in the late summer and this in turn was reflected in the rosin market and we find that "G" gum rosin was quoted as high as $3.15 in September. Since that time rosin has followed other speculative markets. It has declined somewhat and fluctuated over a comparatively narrow range from one day to the next.

As to prospects for 1933 it is interesting to note that the extremely low rate of production has gradually reduced the visible stocks on hand so that the industry is in a better technical position for 1933. Costs of production have been reduced as they have in practically all industries. As to the volume of production it is prophesied by some that there will be a minor increase in 1933 as compared with 1932. If there is such an increase in production it will undoubtedly be small and a conservative estimate would be to place the 1933 production at approximately the same figure as that of 1932. From this it would be assumed that even with the low current rate of consumption visible stocks will be reduced still further during 1933. Any small increase in the rate of business activity throughout the country should put the naval stores industry in a still better position. The increase in business activity during the year is expected to be very small but during the latter half of 1933 it is conceivable that there should be considerable more strength in the rosin market.

In June of 1932 the statement was made before a group of paper mill purchasing agents at a meeting held in connection with the National Convention of the Purchasing Agents Association, that the rosin market was felt to be at a low point in the long term swing. It was prophesied that the general trend from June onward would be very gradually upward disregarding short term fluctuations which might take place from one day to the next. At that time the "G" rosin market was approximately $2.40. The low point since then has been $2.10 with a high of $3.15. The year ended as stated above with a published market of $2.60 so there has been a very small net increase in the average level of the Savannah market and indications are that the general trend will continue upward very slowly with frequent dips and rises from day to day.

Rosin Size[6]

Continuing the trends parallel to practically all raw and finished materials, the year 1932 has seen a further reduction in the tonnage of rosin size consumed by the paper making industry, and that industry has also enjoyed continued reductions in the price of this commodity. Paper mills in 1932 obtained their rosin size regardless of the method by which it was produced at the lowest price it has ever been obtained in the history of the use of it in paper-making.

During the year the major outstanding technical development was the marketing of all grades of paper-making rosin in the form of dry rosin size.

At the very end of the year it is understood that the Bureau of Standards at Washington, just completed a series of tests which indicates, contrary to previous findings on purified fibers, rosin size has exerted a protective effect on the deterioration of sulphite papers. Sheets of sulphite paper sized with 2 per cent of rosin size after a year's time lost only 50 per cent of the folding endurance that an unsized sheet of the same furnish lost in the same time interval. As the Bureau phrases it, the protective effect of the rosin size more than counteracts any deteriorative effect it may have had.

Sodium Aluminate[7]

Several of the manufacturers of this material have placed upon the market a purer grade suitable for paper making. Interest is being shown particularly for its use in sizing at high pH values.

Starches[8]

In line with other raw materials the prices of starch products have declined materially during the year 1932, this decline being in the neighborhood of 20 per cent from the price at the end of 1931. This general price decline has been applicable to all types of starches and the prices are lower than they have been since 1911 and 1912. The market seems rather firm at this writing and further declines are not expected.

There have been several new prepared starches introduced to the paper industry during the past year and several of the starch manufacturers have adopted different methods of treating their starches for particular purposes. New methods of hydrolizing have been introduced which are less expensive than methods heretofore used, which have in turn enabled the manufacturers to offer these products at a lower price than specialties have been offered in the past.

The work of endeavoring to adapt starches to particular fields of endeavor has been continued through the year and much data has been collected that tends to give a clearer picture of just what various starches will do for various operations.

One outstanding development in the industry during 1932 has been the installation of size presses on a number of board machines to improve the quality of the surface of various fancy boards and thereby increase the market for these particular types of higher priced boards and specialties.

The work of developing starch products for greaseproofing and waterproofing has been continued through the year and one manufacturer, at least, has reached the point in their development work where the material has been perfected, but the method of application is still under consideration.

The Bureau of Standards has done considerable work with starches during the year and issued their findings in Research Paper No. 372, which was recently issued.

Sulphur[9]

It has been reported during this year that the Rio Tinto Company has been making efforts to prepare sulphur from pyrites. As far as we know none of this has appeared on the American market but it will be interesting to see if they can compete with Gulf Coast sulphur.

[6] Prepared by A. C. Dreshfield, Paper Makers Chemical Corporation.

[7] Prepared by F. J. Curtis, Merrimac Chemical Company.

[8] Prepared by F. H. Knowlton, Staley Sales Corporation.

IMPORTS OF PAPER AND PAPER STOCK

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING JUNE 17, 1933

CIGARETTE PAPER

American Tobacco Co., Manhattan, Havre, 100 cs.; American Tobacco Co., Schodack, Bordeaux, 75 cs.; Champagne Paper Corp., Schodack, St. Nazaire, 152 cs.; Champagne Paper Corp., Ile de France, Havre, 721 cs.; Standard Products Corp., Ile de France, Havre 77 cs.

WALL PAPER

S. K. Lonegren, Drottningholm, Gothenburg, 1 cs.; R. F. Downing & Co., Kwansi Maru, Kobe, 3 bls.; F. J. Emmerich, Milwaukee, Hamburg, 2 bls., 1 cs.

PAPER HANGINGS

W. H. S. Lloyd & Co., American Merchant, London, 1 cs.

NEWS PRINT

Jay Madden Corp., Stuttgart, Bremen, 483 rolls; Perkins Goodwin & Co., Stuttgart, Bremen, 362 rolls; Parsons & Whittemore, Inc., Drottningholm, Gothenburg, 270 rolls; Jay Madden Corp., Scanpenn, Wiborg, 239 rolls; W. H. Bell, Markland, Liverpool, N. S., 3,446 rolls; Perkins Goodwin & Co., Albert Ballin, Hamburg 112 rolls.

PRINTING PAPER

Jay Madden Corp., Scanpenn, Wiborg, 94 rolls; Ozalid Corp., Rotterdam, Rotterdam, 14 cs.

WRAPPING PAPER

Japan Paper Co., Pennland, Antwerp, 2 cs.; F. C. Strype, Pennland, Antwerp, 2 cs.; ——, Pennland, Antwerp, 7 cs., 1 ble.; R. McBratney Co., Georgic, Liverpool, 2 cs.; F. C. Strype, H. Jaspar, Antwerp, 4 cs.; Lamb Finlay & Co., Transylvania, Glasgow, 1 cs.; ——, Manhattan, Hamburg, 512 rolls.

PACKING PAPER

F. C. Strype, Black Gull, Rotterdam, 10 cs.

FILTER PAPER

H. Reeve Angel & Co. Inc., Pennland, Antwerp, 10 bls.; H. Reeve Angel & Co. Inc., American Merchant, London, 10 cs.; H. Reeve Angel & Co. Inc., Majestic, Southampton, 25 bls., 2 cs.; J. Manheimer, Majestic, Southampton, 74 bls.

FILTER MASS

Atlantic F'd'g Co., Black Gull, Rotterdam, 20 cs.; H. Reeve Angel & Co. Inc., Majestic, Southampton, 8 bls.

METAL COATED PAPER

K. Pauli Co., Stuttgart, Bremen, 34 cs.; National City Bank, Milwaukee, Hamburg, 16 cs.; National City Bank, A. Ballin, Hamburg, 6 cs.; Globe Shipping Co., A. Ballin, Hamburg, 43 cs.

PHOTO PAPER

Chas. Happel, Stuttgart, Bremen, 8 cs.

SURFACE COATED PAPER

Gevaert Co. of America, Pennland, Antwerp, 28 cs.; Globe Shipping Co., A. Ballin, Hamburg, 1 cs.

COATED PAPER

Chas. Happel, A. Ballin, Hamburg, 1 cs.

COVER PAPER

International F'd'g Co., A. Ballin, Hamburg, 3cs.

COLORED PAPER

Borden Riley Paper Co., Pennland, Antwerp, 4 cs.; W. Bersch, Europa, Bremen, 6 cs.

DECALCOMANIA PAPER

B. F. Drakenfeld & Co., Georgic, Liverpool, 10 cs. (duplex).

DECALCOMANIAS

Sellers Transportation Co., Europa, Bremen, 3 cs.; L. A. Consmiller, Europa, Bremen, 8 cs.

TISSUE PAPER

B. F. Drakenfeld & Co., Georgic, Liverpool, 4 cs.; Columbia Carbon & Ribbon Manfg Co., A. Merchant, London, 1 cs.

ENVELOPES

Beckhard Simfred Co., Stuttgart, Bremen, 6 cs.

STRAW BOARDS

Brodmill Co., Rotterdam, Rotterdam, 4 rolls.

PASTE BOARD

C. W. Sellers, Ile de France, Havre, 2 cs.

CARD BOARD

Phoenix Shipping Co., A. Ballin, Hamburg, 41 bls., 41 cs.

MISCELLANEOUS PAPER

Meadows Wye & Co., Drottningholm, Gothenburg, 8 bls.; The Borregaard Co. Inc., Drottningholm, Gothenburg, 118 rolls; Blauvelt Wiley Paper Manfg Co., Drottningholm, Gothenburg, 22 rolls; Steffens Jones Co., Kwansi Maru, Kobe, 1 cs.; Chase National Bank, Kwansi, Maru, Kobe, 20 cs.; Corn Exchange Bank Trust Co., Kwansi Maru, Kobe, 66 cs.; National City Bank, Kwansi Maru, Yokohama, 3 cs.; F. B. Vandegrift & Co., Ile de France, Havre, 7 cs.; Keller Dorian Paper Co., Ile de France, Havre, 5 cs.; C. Schleicher & Schull Co. Inc., Milwaukee, Hamburg, 2 bls., 15 cs.; Old Town Ribbon & Carbon Co., Ingria, Marseilles, 11 cs.;

RAGS, BAGGINGS, ETC.

Van Oppen & Co., Black Gull, Rotterdam, 172 bls. bagging; National City Bank, Transylvania, Glasgow, 231 bls. rags; A. W. Fenton, Inc., Transylvania, Glasgow, 92 bls. paper stock; ——, Transylvania, Glasgow, 134 bls. paper stock; C. Nelson, Transylvania, Glasgow, 14 bls. rags; Castle & Overton, Inc., Transylvania, Glasgow, 74 bls. rags; T. D. Downing & Co., Transylvania, Glasgow, 219

bls. rags; ——, Sarcoxie, Havre, 27 bls. rags; J. Flannery, Sarcoxie, Havre, 45 bls. rags; Castle & Overton, Inc., Sarcoxie, Havre, 56 bls. bagging; Darmstadt Scott & Courtney, Sarcoxie, Dunkirk, 141 bls. bagging; S. Godfrey, Sarcoxie, Dunkirk, 15 bls. rags; Castle & Overton, Inc., Quaker City, Dundee, 100 bls. paper stock; G. W. Millar & Co., Quaker City, Dundee, 26 bls. paper stock; G. A. Henshaw & Son, Quaker City, Dundee, 43 bls. paper stock; E. J. Keller Co. Inc., Quaker City, ——, 37 bls. rags; ——, Ingria, Barcelona, 125 bls. rags; Bank of Manhattan Co., A. Merchant, London, 104 bls. rags; E. J. Keller Co. Inc., Black Falcon, ——, 110 bls. rags; E. J. Keller Co. Inc., Black Falcon, ——, 372 bls. bagging.

OLD ROPE

Banco Coml Italiane Trust Co., A. Merchant, London, 144 coils; National City Bank, A. Merchant, London, 100 coils; Banco Coml Italiane Trust Co., Ingria, Marseilles, 52 coils.

CASEIN

D. C. Andrews & Co., A. Ballin, Hamburg, 60 bags.

GLUE STOCK, ETC.

——, Milwaukee, Hamburg, 29 bags hide glue; Trans-Atlantic Animal By-Products Corp., Polonia, Gdynia, 50 bags hide glue, —, A. Ballin, Hamburg, 75 bags hide glue; ——, A. Ballin, Hamburg, 300 bags bone glue.

CHINA CLAY

L. A. Salomon & Bro., Georgic, Liverpool, 640 bags, 75 casks.

WOOD PULP

Johaneson Wales & Sparre, Inc., Drottningholm, Gothenburg, 50 bls. sulphate; Johaneson Wales & Sparre, Inc., Drottningholm, Gothenburg, 254 bls. sulphite; Chase National Bank, Scanpenn, Stockholm, 200 bls. sulphite, 25 tons; Atterbury Bros. Inc., Scanpenn, Stockholm, 400 bls. sulphite, 50 tons; Lagerloef Trading Co., Scanpenn, Wiborg, 947 bls. sulphate 184 tons; Castle & Overton, Inc., Scanpenn, Wiborg, 2,135 bls. wood pulp, 425 tons; Lagerloef Trading Co., Hallaren, Wiborg, 1,016 bls. mechanical pulp; J. Andersen & Co., Topeka, Greaker, 2,941 bls. sulphite; Atterbury Bros. Inc., Topeka, Drammen, 800 bls. sulphite.

WOOD PULP BOARDS

Johaneson Wales & Sparre, Inc., Milwaukee, Hamburg, 65 rolls, 11 tons.

ALBANY IMPORTS

WEEK ENDING JUNE 17, 1933

Perkins Goodwin & Co., Vigor, Pitea, 600 bls. sulphate, 100 tons; Perkins Goodwin & Co., Vigor, Sundsvall, 10,002 bls. sulphate, 1,693 tons; Johaneson Wales & Sparre, Inc., Vigor, Sundsvall, 923 bls. sulphite, 179 tons; Bulkley Dunton & Co., Vigor, ——, 2,000 bls. sulphite, 406 tons

PORTLAND IMPORTS

WEEK ENDING JUNE 17, 1933

Gottesman & Co. Inc., Topeka, Hurum, 1,200 bls. sulphate.

BOSTON IMPORTS

WEEK ENDING JUNE 17, 1933

G. M. Graves Co., Transylvania, Glasgow, 125 bls. paper stock; ——, A. Merchant, London, 191 bls. rags; International Purchasing Co., Topeka, Oslo, 62 coils old rope; Price & Pierce, Ltd., Topeka, Oslo, 400 bls. sulphite; J. Andersen & Co., Topeka, Greaker, 875 bls. sulphite; Perkins Goodwin & Co., Topeka, Drammen, 375 bls. sulphite; Atterbury Bros. Inc., Topeka, Drammen, 250 bls. chemical pulp; Atterbury Bros. Inc., Topeka, Tofte, 2,250 bls. sulphite; Bulkley Dunton & Co., Tortugas, ——, 500 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING JUNE 17, 1933

Congoleum Nairn Co., Schodack, Bordeaux, 1,191 bls. rags; Congoleum Nairn Co., Schodack, St. Nazaire, 186 bls. rags; Gottesman & Co. Inc., Topeka, Greaker, 1,014 bls. sulphite; Gottesman & Co. Inc., Topeka, Hurum, 1,200 bls. sulphate; Atterbury Bros. Inc., Topeka, Tofte, 2,775 bls. sulphite; Bulkley Dunton & Co., Simon von Utrecht, —— 375 bls wood pulp.

CAMDEN IMPORTS

WEEK ENDING JUNE 17, 1933

Pagel Horton & Co. Inc., Vigor, Pitea, 2,250 bls. sulphate, 375 tons; Bulkley Dunton & Co., Vigor, ——, 500 bls. sulphate, 101 tons.

WILMINGTON IMPORTS

WEEK ENDING JUNE 17, 1933

Castle & Overton, Inc., Scanpenn, Wiborg, 4,601 bls. wood pulp.

PHILADELPHIA IMPORTS

WEEK ENDING JUNE 17, 1933

Brown Bros. Harriman & Co., Vigor, Sundsvall, 4,200 bls. sulphite, 711 tons; Bulkley Dunton & Co., Vigor, ——, 1,250 bls. sulphite, 254 tons; National City Bank, Giulia, Algiers, 181 bls. rags; Castle & Overton, Inc., Scanpenn, Wiborg, 270 bls. wood pulp, 54 tons; Lagerloef Trading Co., Scanpenn, Wiborg, 258 bls. sulphate, 51 tons; Lagerloef Trading Co., Scanpenn, Wiborg, 156 bls. sulphite, 26 tons; Castle & Overton, Inc., Schodack, Bordeaux, 358 bls. rags; H. G. Lichtenstein, Schodack, Bordeaux, 452 bls. rags; Keene & Arkus, Inc., Schodack, Bordeaux, 467 bls. rags; E. J. Keller Co. Inc., Schodack, ——, 83 bls. rags; ——, Topeka, Oslo, 50 bls. 16 rolls news print; B. L. Soberski, Topeka, Greaker, 1,500 bags wood flour; J. Andersen & Co., Topeka. Greaker, 297 bls. sulphite; Atterbury Bro. Inc., Topeka, Drammen, 750 bls. mechanical pulp; Wilkinson Bros. & Co., Topeka, Drammen, 100 rolls news print; ——, Topeka, Drammen, 243 rolls news print; Wilkinson Bros. & Co., Topeka, Bamble, 69 rolls news print; Irving Trust Co., Topeka, Bamble, 250 bls. mechanical pulp; Atterbury Bros. Inc., Topeka, Tofte, 1,860 bls. sulphite; Castle & Overton, Inc., Quaker City, Dundee, 184 bls. paper stock; ——, Quaker City, Dundee, 25 bls. paper stock; Castle & Overton, Inc., Sarcoxia, Havre, 150 bls. rags; J. Steers, Sarcoxia, Havre, 607 bls. rags; E. J. Keller Co. Inc., Sarcoxie, ——, 95 bls. rags; E. J. Keller Co. Inc., City of Flint, ——, 64 bls. rags; Castle & Overton, Inc., Sarcoxie, Dunkirk, 65 bls. rags.

NEWPORT NEWS IMPORTS

WEEK ENDING JUNE 17, 1933

Bulkley Dunton & Co., Vigor ——, 2500 bls. sulphate 508 tons; Atterbury Bros. Inc., Topeka Tofte, 750 bls. sulphite; The Borregaard Co. Inc., Topeka Bamble, 3450 bls. sulphate.

NORFOLK IMPORTS

WEEK ENDING JUNE 17, 1933

E. J. Keller Co. Inc., Black Tern, ——, 58 bls. bagging.

Banco Coml Italiane Trust Co., Giulia, Trieste, 106 bls. bagging

SAVANNAH IMPORTS

WEEK ENDING JUNE 17, 1933

Manufacturers Trust Co., Kwansi Maru, Shanghai, 206 bls. bagging.

New York Market Review

Office of the PAPER TRADE JOURNAL,
Wednesday, June 21, 1933.

Sentiment in the local paper market continues optimistic. Demand for the various standard grades of paper is brisk. Sales forces of the leading paper organizations are busier than usual at this time of year. Prices again advanced on some of the grades, while others were steady.

The news print paper market displayed a slightly stronger undertone, due mainly to expectations of general improvement under the Industrial Recovery Act. Production in North America during May amounted to 274,373 tons, according to figures gathered by the News Print Service Bureau.

Paper board mill operations are increasing. Demand for box board is persistent. Quotations again advanced all along the line. The fine paper market is more buoyant, with prices steady to firm. Tissues are moving in good volume. The coarse paper market is quite active, with prices well maintained.

Mechanical Pulp

The ground wood pulp market is more active than for some time past. Prices of both imported and domestic grades are higher. No. 1 foreign mechanical pulp is now quoted at from $24 to $26 per ton, on dock, Atlantic ports. No. 1 domestic and Canadian is selling at from $18 to $26 per ton, f.o.b. pulp mill.

Chemical Pulp

Paper mill demand for the various grades of foreign and domestic chemical pulp is very persistent. Offerings are rather limited and quotations have again advanced. Imported bleached sulphite is quoted at from $2.25 to $2.50, while easy bleaching is offered at from $1.70 to $1.85, on dock, Atlantic ports. Domestic bleached sulphite is selling at from $2.25 to $3.00, f.o.b. pulp mill.

Old Rope and Bagging

The old rope market is decidedly firm. Demand for both domestic and imported old manila rope is more active. Small mixed rope is steady. Quotations on old rope are higher. The bagging market is rising. Foreign gunny bagging is particularly strong and is now quoted at from $1.10 to $1.20, f.o.b. New York.

Rags

Demand for the various grades of domestic rags is growing. New cotton rags are in a better position, especially No. 1 new white shirt cuttings. Roofing rags are seasonally active and firmer. The imported rag market is gradually improving. No. 1 white linens, lindsay garments and dark cottons are firmer.

Waste Paper

The paper stock market continues to run wild, although changes reported are less radical. Strictly overissue news is now quoted at from 70 to 80 cents and strictly folded news at from 65 to 75 cents, while No. 1 mixed paper is holding at from 65 to 70 cents. The better grades of waste paper are sharing in the movement.

Twine

Conditions in the twine market continue to improve. Demand for the various grades is quite active and supplies are moving into consumption in good volume. Due to the advancing market on raw fiber, quotations on several items of soft fiber twines have been revised upward.

Boston Paper Trade Happenings

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., June 19, 1933.—The Gilbert Paper Company, of Menasha, Wis., of which the Andrews Paper Company is a representative, has issued a new leather-bound, embossed sample, a very elaborate production. The institutional section in the first part and the remainder consists of samples of all the lines made by the company. A limited number will be given out to the printing trade.

A fine paper meeting of the Andrews Paper Company, the second in a series of educational ones was held recently, with Fred Herbolzheimer presiding. The fine papers distributed by the company were discussed.

Ted Gilbert, treasurer of the Gilbert Paper Company, recently passed three days with the Andrews Paper Company, and visited many of the customers of the latter company.

The Boston Envelope Company is to have a new factory building erected at High, Maverick and Colburn streets, East Dedham, Mass., at a cost of $30,000. The building is to be of brick, mill construction, three stories high.

Arthur V. Howland, purchasing agent and vice-president of the Tileston & Hollingsworth Company, presided at the convention of the National Association of Purchasing Agents held at the Hotel Statler, June 12-15, inclusive.

Gordon Auchincloss has been elected a director of the International Paper and Power Company, and also of the International Paper Company, filling vacancies on both boards.

Bird and Son, Inc., East Walpole, Mass., is to replace the roof at the repair shop off Water street, at a cost of $500.

Offices of paper jobbers were generally closed June 17, Bunker Hill Day.

Hardwick Mill Sale Postponed

BOSTON, Mass., June 19, 1933.—The postponed meeting of stockholders and creditors of the George W. Wheelwright Company, called to show cause why the petition of George W. Wheelwright, Carl F. Woods and George Alpert, the receivers, to sell the Hardwick Mill, Hardwick, Mass., and equipment, at private sale should not be allowed, was held Friday, June 16, but postponed again until July 6, to allow time for bids to be received by the receivers. There is a large number of prospective customers and the court decided it would be wise to postpone the matter of sale. It is possible that a good sum may be realized from a sale of the property.

Miscellaneous Markets

Office of the PAPER TRADE JOURNAL,
Wednesday, June 21, 1933.

BLANC FIXE.—Demand for blanc fixe is fairly persistent. Prices are holding to schedule, without difficulty. The pulp is quoted at from $42.50 to $45.00 per ton, in bulk; while the powder is selling at from 3 to 3½ cents per pound, in barrels, at works.

BLEACHING POWDER.—The bleaching powder market is in a sound position. Shipments against contract are going forward in good volume. Prices are generally holding to schedule. Bleaching powder is quoted at from $1.75 to $2.00 per 100 pounds, in drums, at works.

CASEIN.—The casein market advanced. Domestic standard ground is quoted at 11½ to 12 cents and finely ground 12½ to 13 cents per pound. Argentine standard ground is selling at 12 cents and finely ground at 12½ cents per pound, all in bags, car lot quantities.

CAUSTIC SODA.—Steadiness prevails in the caustic soda market. The contract movement continues fairly heavy. Solid caustic soda is quoted at from $2.55 to $3.00; while the flake and ground are selling at from $2.95 to $3.00 per 100 pounds, in large drums, at works.

CHINA CLAY.—The china clay market is inclined to fluctuate. Demand from the paper mills is persistent. Imported china clay is quoted at from $12 to $17 per ton, ship side; while domestic paper making clay is selling at from $4.50 to $12 per ton, at mine.

CHLORINE.—Business in the chlorine market is more buoyant than of late. The contract movement is well up to average. Prices are steady to firm. Chlorine is quoted at $1.75 per 100 pounds, in tanks, or multi-unit cars, in ton lots, or over, at works.

ROSIN.—The rosin market is fairly steady. The grades of gum rosin used in the paper mills are now quoted at from $4.50 to $4.70 per 280 pounds, in barrels, at works; while wood rosin is selling at $3.30 per 280 pounds, in barrels, at southern shipping points.

SALT CAKE.—Supplies of salt cake are moving in good volume. Prices continue firm. Salt cake is quoted at from $13.50 to $14; chrome salt cake at from $13 to $13.50 per ton, at works; while imported salt cake is selling at from $13.50 to $14 per ton, on dock.

SODA ASH.—Trading in the soda ash market is lively. Contract shipments are moving in good volume. Prices are holding to schedule. Quotations on soda ash, in car lots, at works, per 100 pounds, are as follows: in bulk, $1.05; in bags, $1.30; and in barrels, $1.43.

STARCH.—The starch market is exhibiting a strong undertone. The contract movement is heavier. Prices are well maintained. Special paper making starch is quoted at $2.64 per 100 pounds, in bags; and at $2.91 per 100 pounds, in barrels, at works.

SULPHATE OF ALUMINA.—Paper mill demand for sulphate of alumina is brisk. Prices are holding up very well. Commercial grades are quoted at from $1.25 to $1.46; while iron free is selling at from $1.90 to $2.05 per 100 pounds, in barrels, at works.

SULPHUR.—The sulphur market continues steady. Sulphur is quoted at $18 per long ton, on orders of 1,000 tons, or over, on yearly contracts; and at $20 per ton on any smaller quantity over that period. On spot and near by car loads, the quotation is $21 per ton.

TALC.—Conditions in the talc market are improving. Supplies are moving into consumption in good volume. Domestic talc is still quoted at from $16 to $18 per ton, in bulk, at eastern mines; while imported talc is selling at from $18 to $22 per ton, ship side.

Market Quotations

Paper

(F. o. b. Mill)

Ledgers	6.50	@38.00
Bonds	4.75	@53.25
Index	6.00	@12.00
Writings—		
Extra Superfine	6.50	@15.00
Superfine	6.25	@14.75
Tub sized	4.50	@ 7.00
Engine sized	4.00	@ 5.00
Book, Cased—		
S. & S. C.	4.25	@ 5.00
M. F.	3.75	@ 4.25
Coated and Enamel	5.00	@ 9.00
Lithograph	5.00	@ 9.00
Tissues—Per Ream—		
White No. 1	.50	@ .70
White No. 2	.45	@ .60
Anti-Tarnish M. G. only	.65	@ .70
Colored	.70	@ .90
Kraft	.65	@ .70
Manila	.55	@ .60
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.00	@ 5.25
No. 2 Wood	3.50	@ 4.00
Butchers	3.37½	@ —
Fibre Papers—		
No. 1 Fibre	4.25	@ 5.50
No. 2 Fibre	4.00	@ 4.75
Common Bogus	1.50	@ 3.00
Screenings	2.00	@ 3.00
Card Middles	4.00	@ 5.00
Glassine—		
Bleached, basis 25 lbs., No. 1	.09¾	@ —
No. 2	.11¾	@ —
Bleached, basis 20 lbs.	.11¾	@ —

(Delivered New York)

News, per ton—		
Roll, contract	40.00	@ —
Rolls, spot	40.00	@ —
Sheets	45.00	@ —
Side Runs	25.00	@ —
Kraft—		
No. 1 Domestic	4.50	@ 4.75
No. 2 Domestic	3.00	@ 3.25
Southern	3.00	@ 3.25
Imported	2.75	@ 3.50
Boards—per ton—		
News	42.50	@45.00
Straw	37.50	@40.00
Chip	40.00	@42.50
Binders Boards	62.00	@70.00
Kraft Liner	52.50	@55.00
Standard 85 Test Jute Liner	35.00	@37.50
Sgl. Mla. Ll. Chip.	50.00	@52.50

(F. o. b. Mill)

Wood Pulp Boards	70.00	@80.00

Mechanical Pulp

(On Dock, Atlantic Ports)

No. 1 Imported—		
Moist	24.00	@26.00
Dry	24.00	@26.00
[illegible] Mill)		
No. 1 Domestic and Canadian	18.00	@26.00

Chemical Pulp

(On Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	2.25	@ 2.50
Easy Bleaching	1.70	@ 1.85
No. 1 strong unbleached	1.55	@ 1.75
[illegible] bleached	1.65	@ 1.85
No. 2 strong unbleached	1.40	@ 1.55
No. 1 Kraft	1.25	@ 1.60
No. 2 Kraft	1.20	@ 1.35
Sulphate—		
Bleached	2.25	@ 3.00

(F. o. b. Pulp Mill)

Sulphite (Domestic and Canadian)—		
Bleached	2.00	@ 3.75
Easy Bleaching	1.60	@ 1.75
News	1.50	@ 1.65
Mitscherlich unbleached	2.25	@ 2.50
Kraft (Domestic)	1.25	@ 2.75

(Delivered Paper Mills)

Soda Bleached	2.00	@ —

Domestic Rags

New Rags

(Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—		
New White, No. 1	5.50	@ 6.00
Silesias No. 1	3.75	@ 4.25
New Unbleached	5.50	@ 6.00
New Soft Blacks	3.00	@ 3.25
Blue Overall	2.75	@ 3.25
Fancy	1.50	@ 1.75
Washables	1.25	@ 1.50
Mixed Khaki Cuttings	2.50	@ 2.75
O. D. Khaki Cuttings	2.75	@ 3.25
Men's Corduroy	1.50	@ 1.75
New Mixed Blacks	2.50	@ 2.75

Old Rags

White, No. 1—		
Repacked	3.75	@ 4.00
Miscellaneous	3.00	@ 3.50
White, No. 2—		
Repacked	2.00	@ 2.50
Miscellaneous	1.75	@ 2.00
Thirds and Blues—		
Repacked	1.75	@ 2.00
Miscellaneous	1.50	@ 1.75
Black Stockings	2.50	@ 3.00
Roofing Rags—		
No. 1	.90	@ .95
No. 2	.80	@ .85
No. 3	.75	@ .80
No. 4	.70	@ .75
No. 5A	.65	@ .70

Foreign Rags

New Rags

New Dark Cuttings	1.50	@ 1.60
New Mixed Cuttings	1.60	@ 1.70
New Light Silesias	3.25	@ 3.50
Light Flannelettes	3.00	@ 3.25
Unbleached Cuttings	5.00	@ 5.25
New White Cuttings	5.00	@ 5.50
New Light Oxfords	3.25	@ 3.50
New Light Prints	2.25	@ 2.50

Old Rags

No. 1 White Linens	6.25	@ 6.75
No. 2 White Linens	5.25	@ 5.75
No. 3 White Linens	4.25	@ 4.00
No. 4 White Linens	2.00	@ 2.25
No. 1 White Cotton	3.75	@ 4.00
No. 2 White Cotton	3.00	@ 3.25
No. 3 White Cotton	2.50	@ 2.75
No. 4 White Cotton	1.50	@ 1.60
Extra Light Prints	2.00	@ 2.25
Ord. Light Prints	1.75	@ 1.85
Med. Light Prints	1.55	@ 1.65
Dutch Blue Cottons	1.65	@ 1.80
French Blue Linens	2.10	@ 2.25
German Blue Linens	1.85	@ 2.00
German Blue Cottons	1.35	@ 1.50
Checks and Blues	1.30	@ 1.40
Lindsay Garments	1.10	@ 1.15
Dark Cottons	.95	@ 1.00
Old Shopperies	.85	@ .90
New Shopperies	.80	@ .85
French Blues	1.50	@ 1.65

Old Rope and Bagging

(Prices to Mill f. o. b. N. Y.)

Gunny No. 1—		
Foreign	1.10	@ 1.20
Domestic	1.05	@ 1.15
Wool Tares, light	.90	@ 1.00
Wool Tares, heavy	.90	@ 1.00
Bright Bagging	.90	@ .95
Manila Rope—		
Foreign	2.00	@ 2.25
Domestic	1.90	@ 2.00
Small Mixed Rope	.60	@ .65
New Burlap Cut	1.25	@ 1.50
Hessian Jute Threads—		
Foreign	2.60	@ 2.75
Domestic	2.80	@ 3.00

Old Waste Papers

(F. o. b. New York)

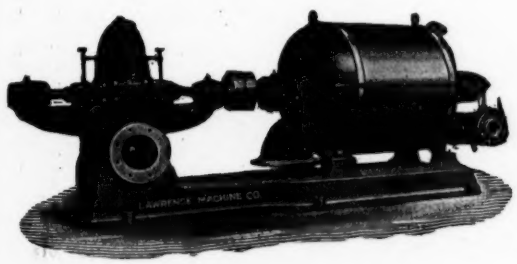
Shavings—		
White Envelope Cuttings	2.35	@ 2.50
Ordinary Hard White No. 1	2.15	@ 2.25
Hard White No. 2	1.70	@ 1.80
Soft White No. 1	1.65	@ 1.75
Flat Stock—		
Stitchless	.90	@ .95
Overissue Mag	.90	@ .95
Solid Flat Book	.85	@ .95
Crumpled No. 1	Nominal	
Solid Book Ledger	1.50	@ 1.75
Ledger Stock	.90	@ 1.00
New B. B. Chips	.60	@ .70
Manilas—		
New Env. Cut	1.60	@ 1.70
New Cuttings	1.20	@ 1.25
Extra No. 1 old Print	.90	@ 1.00
	Nominal	
Bogus Wrapper	.60	@ .70
Container	.65	@ .75
Old Kraft Machine—		
Compressed bales	1.00	@ 1.10
News—		
No. 1 White News	1.10	@ 1.15
Strictly Overissue	.70	@ .80
Strictly Folded	.65	@ .75
No. 1 Mixed Paper	.65	@ .70

Horizontally Split Casing Double Suction Pumps

LAWRENCE PUMPS

The name protects and guarantees you satisfaction.

We are the original designers and builders of the LAWRENCE PUMP.



Lawrence pumps for all conditions and services. Forty-four years of practical experience with centrifugal pump development places us among the leaders. Our efforts have been rewarded by the acceptance of our product in general.

Thousands of installations and the successful performance of our pumps should be sufficient proof of our ability to handle your pumping problems. Our engineering force is at your command.

Have only Lawrence Pumps, manufactured by the

Lawrence Machine & Pump Company
371 Market St. Lawrence, Mass.

THE DRAPER FELTS

All kinds and styles of Felts for all kinds and styles of Papers.

Write us about your Felt problems and let us help you reduce your Felt Costs—we will call anywhere at any time.

DRAPER BROS. COMPANY
CANTON, MASS.
Woolen manufacturers since 1856

TI MACHINE STEEL SHELL BURRS

MANUFACTURED IN STANDARD SIZES SUITED TO THE PAPER TRADE

We invite your inquiries

OTHER SPECIALTIES

WARREN IMPROVED CALENDER With flexible blades, Universal Adjustment and Control, Patented — DOCTORS

WARREN IMPROVED DOUBLE DRUM— WINDER

BALL HYDRANT for Stock Circulating Systems — VALVES

TI MACHINE Semi-Steel Sectional 3-4-5-6-7 Cuts per Inch — BURRS

AND OTHER PAPER MILL MACHINERY

MANUFACTURED BY
TICONDEROGA MACHINE WORKS
TICONDEROGA, N. Y.
SEND FOR BULLETINS—ASK FOR PRICES

Sulphur

A FIRST REQUISITE

in

Paper Making

Large Production
Ample Reserves
Prompt Deliveries
Purity 99½%

TEXAS GULF SULPHUR CO.
75 E. 45th Street New York City
Mines: Gulf, Newgulf and Long Point, Texas

Twines
(F. o. b. Mill)

Cotton—			
18 basis	.30	@	.32
No. 1	.20	@	.2-
No. 2	.19	@	.20
No. 3	.17	@	.18
A. Italian, 18 basis	.36	@	.37
Flaxed Jute—			
Dark, 18 basis	.18	@	.20
Light, 18 basis	.20	@	.22
Jute Wrapping, 3-6 Ply—			
No. 1	.15½	@	.16½
No. 2	.15	@	.16
Tube Rope—			
4-ply and larger	.08¼	@	.10¼
Fine Tube Rope—			
4-ply	.12¼	@	.12¾
3-ply	.13¼	@	.13¾
2-ply	.14¼	@	.14¾
Paper Makers Twine			
Balls	.09¼	@	.11¼
Box Twine, 2-3 ply	.11¼	@	.12¼
Jute Rope	.09¾	@	.10¾
White Hemp	.12¾	@	.13¾
Java Sisal—			
No. 1 Basis	.11½	@	—
No. 2 Basis	.10½	@	—
New Zealand Sisal	.11½	@	—
Sisal Lath Yarn—			
No. 1	.13½	@	.15½
No. 2	.11½	@	.13½
Manila Twine	.24½	@	.29½

CHICAGO

Paper
(F. o. b. Mill)

Rag Bond	.30	@	.53¼
Water Marked Sulphite Bond	.09	@	.12
Sulphite Bond	.04	@	.11
Superfine Writing	.18	@	.24
No. 1 Fine Writing	.14	@	.18
No. 2 Fine Writing	.12	@	.14
No. 3 Fine Writing	.07	@	.18
No. 1 M. F. Book	.06½	@	.07¼
No. 2 M. F. Book	.05¼	@	.06¼
No. 1 S.&S.C. Book	.06¾	@	.07¾
No. 2 S.&S.C. Book	.05¾	@	.06½
Coated Book	.07½	@	.12
Coated Label	.07½	@	.10
No. 1 Manila	.04¼	@	.05¼
No. 1 Fibre	.04¾	@	.05¾
No. 2 Manila	.04¼	@	.04¾
Butcher's Manila	.03¼	@	.03¾
No. 1 Kraft	3.50	@	4.50
Southern Kraft	2.62½	@	—
No. 2 Kraft	2.62½	@	—
Wood Tag Boards	.04¼	@	.06¾
Sulphite Screenings	.03	@	.03¾
Manila Tissue	.07	@	.07¾
White Tissue	.07¼	@	.07½

(Delivered Central Territory)

News, per ton—			
Rolls, contract	45.00	@	—
Sheets	50.00	@	—
Boards, per ton—			
Plain Chip	27.50	@	—
Solid News	30.00	@	—
Manila Lined Chip	37.50	@	—
Patent coated	47.50	@	—
Container Lined—			
85 Test	50.00	@	55.00
100 Test	55.00	@	60.00

Old Papers
(F. o. b. Chicago)

Shavings—			
No. 1 White Envelope cuttings	1.50	@	1.55
No. 1 Hard White	1.40	@	1.45
No. 1 Soft White	1.00	@	1.10
Ledger & Writings	.55	@	.60
Solid Books	.45	@	.50
Blanks	1.00	@	1.05
Krafts	.70	@	.80
New Kraft Cuts	1.15	@	1.25
Manila Env. Cuts	1.25	@	1.30
Ex. No 1 Manila	.90	@	1.00
Print Manila	.30	@	.40
Overissue News	.45	@	.50
Old Newspapers—			
No. 1	.45	@	.50
Mixed Papers—			
No. 1	.25	@	.30
Roofing Stocks—			
No. 1	30.00	@	—
No. 2	28.00	@	—

PHILADELPHIA

Paper
(F. o. b. Mill)

Bonds	.04	@	.40
Ledgers	.06	@	.40
Writings—			
Superfine	.10	@	.18
Extra Fine	.15	@	.26
Fine	.15	@	.26
Fine, No. 2	.10	@	.25
Fine No. 3	.05½	@	.18
Book, M. F.	.04¾	@	.07
Book, S. S. & C.	.05	@	.07½
Book, Coated	.06	@	.16
Coated Lithograph	.06	@	.11
Label	.07	@	.11
No. 1 Jute Manila	.06	@	.09
Manila Sul., No. 1	.03	@	.05
Manila No. 2	.03	@	.04
No. 1 Kraft	.05¼	@	.06
No. 2 Kraft	03¾	@	04¼
Southern Kraft	2.75	@	4.00
Common Bogus	.03	@	.04

(Delivered Philadelphia)

News Print Rolls	46.00	@	50.00
Straw Board	37.00	@	40.00
News Board	35.00	@	37.00
Chip Board	35.00	@	37.00
Wood Pulp Board	70.00	@	85.00
Binder Boards—			
No. 1, per ton	75.00	@	77.00
No. 2, per ton	65.00	@	70.00
Carload lots	60.00	@	70.00
Tarred Felts—			
Regular	52.25	@	54.25
Slaters (per roll)	.84	@	.94
Best Tarred, 1-ply (per roll)	1.95	@	2.10
Best Tarred, 2-ply (per roll)	1 50	@	1.60
Best Tarred, 3-ply	2.00	@	2.25

Domestic Rags (New)
(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White, No. 1	.03½	@	.04
New White, No. 2	.02½	@	.04
Light Silesias	.02½	@	.03
Silesias, No. 1	.03	@	.03½
Black Silesias, soft	.02½	@	.03
New Unbleached	.05	@	.05½
Washable, No. 1	.01½	@	.02
Blue Overall	.03½	@	.04
Cottons—According to grades—			
Washable, No. 2	.02½	@	.03
New Blue	.01½	@	.03
Fancy	.01½	@	.03
New Black Soft	.02	@	.04
New Light Seconds	.01½	@	.02
New Dark Seconds	1.50	@	1.75
Khaki Cuttings—			
No. 1 O.D.	.03	@	.04
No. 2 Mixed	.03	@	.04
Corduroy	.02	@	.03
New Canvas	.03½	@	.04½
New Black Mixed	.02½	@	.03½

Domestic Rags (Old)

White No. 1—			
Repacked	2.50	@	3.50
Miscellaneous	1.75	@	2.25
M. G.	3.00	@	3.75
Thirds and Blues			
Miscellaneous	1.00	@	1.50
Repacked	1.50	@	2.00
Black Stockings (Export)	2.00	@	3.50
Roofing Stock—			
Foreign No. 1	.50	@	.75
Repacked	.70	@	.85

Bagging
(F. o. b. Phila.)

Gunny, No. 1—			
Foreign	1.25	@	1.50
Domestic	1.50	@	1.75
Manila Rope	2.00	@	2.25
Sisal Rope	1.25	@	1.50
Mixed Rope	1.00	@	1.10
Scrap Burlaps—			
No. 1	1.25	@	1.50
No. 2	.80	@	1.00
Wool Tares, heavy	2.75	@	—
Mixed Strings	1.15	@	1.25
No. 1 New Light Burlap	2.25	@	2.50
New Burlap Cuttings	2.00	@	2.25

Old Papers
(F. o. b. Phila.)

Shavings—			
No. 1 Hard White	1.90	@	2.00
No. 2 Hard White	1.50	@	1.60
No. 1 Soft White	1.70	@	1.75
No. 2 Soft White	1.10	@	1.15
No. 1 Mixed	.70	@	.80
No. 2 Mixed	.60	@	.70
Solid Ledger Stock	1.25	@	1.30
Writing Paper	1.00	@	1.10
No. 1 Books, heavy	.70	@	.75
No. 2 Books, light	.70	@	.75
No. 1 New Manila	1.25	@	1.30
No. 1 Old Manila	.90	@	1.00
Print Manila	.80	@	.90
Container Manila	.75	@	.80
Old Kraft	1.00	@	1.25
Common Paper	.50	@	.55
No. 1 Mixed Paper	.65	@	.70
Straw Board Chip	.55	@	.60
Binders Board Chip	.65	@	.70
Corrugated Board	.70	@	.75
Overissue News	.65	@	.70
Old Newspaper	.75	@	.80

BOSTON

Paper
(F. o. b. Mill)

Ledgers—			
Sulphite	.06	@	.12½
Rag Content	.12	@	.30
All Rag	.36	@	.52½
Bonds—			
Sulphite	.05¾	@	.11½
Rag Content	.12	@	.30
All Rag	.36	@	.65
Writings	.06½	@	.20
Superfines	.11	@	.31
Book, Super	.06	@	.09
Book, M. F.	.05½	@	.08½
Book, Coated	.08½	@	.18
Coated Litho	.09	@	.12
Label	.09½	@	.15
Jute Manila No. 1	.11	@	.13
Manila, Sul. No. 1	.04¾	@	.06¾
Manila, Sul. No. 2	.03¾	@	.04½
No. 1 Kraft	—	@	.04¾
No. 2 Kraft	.03	@	—

(F. o. b. Boston)

Southern Kraft	.03	@	—

(F. o. b. destination in carload lots, f. o. b. mill in less than carload lots.)

Common Bogus	.02	@	.02¾

(Delivered New England points)

News Print, rolls	44.50	@	—
Straw Board, rolls	.009	—	@35.00
Straw Board in Sheets, basis 35s to 70s	—	@	40.00
Filled News Board	42.50	@	47.50
Chip Board	40.00	@	45.00
Chip Board (Creasing)	—	@	42.50
Single Manila Lined Chip	50.00	@	60.00
Single White, Patent Coated News Board—Bender	60.00	@	70.00
Wood Pulp Board	70.00	@	75.00
Binder Boards	62.00	@	75.00

Old Papers
(F. o. b. Boston)

Shavings—			
No. 1 Soft White	1.40	@	1.70
No. 1 Old Manila	.50	@	.60
No. 1 Mixed	.80	@	.90
No. 2 Mixed	.40	@	.50
Solid Ledger Books	1.20	@	1.40
Overissue Ledger Stock	1.15	@	1.30
Mixed Ledgers	.70	@	.85
No. 1 Books, heavy	.65	@	.75
No. 1 Books, light	—	@	.30
Crumpled Stitchless Book Stock	.50	@	.60
Manila Env. Cuttings	1.25	@	1.30
No. 1 Old Manila	.70	@	.80
White Blank News	1.05	@	1.15
No. 1 Kraft	.90	@	1.05
Manila	.85	@	1.00
No. 1 Mixed Papers	.60	@	.65
Print Manila	.65	@	.80
Overissue News	.70	@	.80
Old Newspapers	.57½	@	—
Box Board Chips	.55	@	.65
Corrugated Boxes	.50	@	.65
Screening Wrappers	.60	@	.75

Bagging
(F. o. b. Boston)

Manila Rope—			
Foreign	1.75	@	2.05
Domestic	1.75	@	2.00
Transmission Rope	1.15	@	1.25
Mixed Strings	.25	@	.30
Jute Rope	.95	@	1.05
Jute Carpet Threads	.25	@	.30
Gunny No. 1—			
Foreign	1.25	@	—
Domestic	.70	@	1.00
Bleachery Burlap	2.00	@	2.25
Scrap Burlap	.80	@	.85
No. 1 Scrap Burlap	.95	@	1.05
Scrap Sisal	.80	@	1.00
Scrap Sisal for shredding	1.10	@	—
Wool Tares, heavy	1.10	@	1.25
New Burlap Cutting	.95	@	1.00
Australian Wool Pouches	2.25	@	2.60
Heavy Baling Bagging	1.25	@	1.50
Paper Mill Bagging	.65	@	.80
Bagging No. 2	.50	@	.60
No. 1 Burlap	1.75	@	2.00

Domestic Rags (New)
(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	—	@	.01½
New White No. 1	.05½	@	—
New White No. 2	.04½	@	.05
Silesias No. 1	.03½	@	—
New Black Silesias	.02½	@	.03
New Unbleached	.06	@	—
Fancy	—	@	.02½
Washable	—	@	.01½
Cottons—According to grades—			
Blue Overalls	—	@	.03¾
New Black, soft	.04	@	.04½
Khaki Cuttings	.03	@	.03¼
O. D. Khaki	.03	@	.03¼
Corduroy	.01¾	@	.02
New Canvas	—	@	.05
B.V.D. Cuttings	.04	@	.04¼

Domestic Rags (Old)
(F. o. b. Boston)

Canvas	.04½	@	—
White No. 1—			
Repacked	3.00	@	3.50
Miscellaneous	2.00	@	—
White No. 2—			
Repacked	.01½	@	.01¾
Miscellaneous	.01½	@	.01¾
Twos and Blues	1.25	@	1.50
Thirds and Blues			
Repacked	1.10	@	1.25
Miscellaneous	.85	@	.90
Black Stockings	2.25	@	2.50
Roofing Stock			
No. 1	.85	@	.95
No. 2	.65	@	.75
No. 3	.50	@	.55

Foreign Rags
(F. o. b. Boston)

Dark Cottons	.85	@	1.00
New No. White Shirt Cuttings	.04½	@	.05
Dutch Blues	1.50	@	1.75
New Checks & Blues	2.25	@	2.50
Old Fustians	1.15	@	—
Old Linsey Garments	.90	@	1.05

TORONTO

Paper
(F. o. b. Mill)

Bond—			
No. 1 Sulphite	.09¾	@	—
No. 2 Sulphite	.08	@	—
No. 1 Colored	.10¼	@	—
No. 2 Colored	.08½	@	.10½
Ledgers (sulphite)			
Ledgers, No. 1	.34½	@	—
Ledgers, No. 2	.25½	@	—
Writing	.09	@	.09½
Book—			
No. 1 M. F. (Carloads)	6.20	@	—
No. 3 M. F. (Carloads)	5.70	@	—
No. 4 M. F. (carloads)	4.75	@	—
No. 1 S. C. (carloads)	6.65	@	—
No. 3 S. C. (carloads)	6.20	@	—
No. 4 S. C. (carloads)	5.20	@	—
No. 1 Coated and Litho	12.00	@	—
No. 2 Coated and Litho	10.50	@	—
No. 3 Coated and Litho	9.50	@	—
Coated tinted	14.00	@	—
Wrapping—			
Rag Brown	4.25	@	—
White Wrap	2.00	@	—
"B" Manila	4.75	@	—
No. 1 Manila	5.25	@	—
Fiber	5.25	@	—
Kraft, M. F.	5.75	@	—
Kraft No. 2	5.25	@	—

(F.O.B. Cars Toronto)

News, per ton—			
Rolls (contract)	45.50	@	—
Sheets	50.50	@	—

Pulp
(F. o. b. Mill)

Ground Wood	18.00	@	20.00
Sulphite easy bleaching	40.00	@	—
Sulphite, news grade	38.00	@	—
Sulphite, bleached	45.00	@	50.00
Sulphate	50.00	@	—

Old Waste Paper
(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	1.80	@	—
Soft White	1.40	@	—
White Blk. News	1.25	@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)	.90	@	—
Light and Crumpled Book Stock	.80	@	—
Ledgers and Writings	1.00	@	—
Manilas—			
New Manila Cut	1.25	@	—
Printed Manilas	.55	@	—
Fancy Shirt Cuttings	.02¼	@	.02½
Kraft	1.25	@	—
News and Scrap—			
Strictly Overissue	.50	@	—
Strictly Folded	.50	@	—
No. 1 Mixed Paper	.40	@	—

Domestic Rags
(Price to mills, f. o. b. Toronto)

No. 1 White Shirt Cuttings	.04¼	@	.04¾

COLOR PROBLEMS SOLVED

efficiently—accurately—economically

TECHNICALLY trained representatives

at your disposal.

Current dyestuffs stocked

at all branches

GDC

GENERAL DYESTUFF CORPORATION

230 FIFTH AVENUE
NEW YORK, N. Y.

Boston, Mass.
Providence, R. I.
Philadelphia, Pa.
Charlotte, N. C.
Chicago, Ill.
San Francisco, Cal.

PAPER TRADE JOURNAL

ESTABLISHED 1872

SIXTY-FIRST YEAR

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

Published Every Thursday by the LOCKWOOD TRADE JOURNAL CO., Inc.

GEO. S. MACDONALD, President. J. BANNINGA, Sec.-Treas.

Published at 34 No. Crystal St., East Stroudsburg, Pa.
Executive and Editorial Offices: 15 West 47th Street, New York
Chicago Office: 123 West Madison St.

TABLE OF CONTENTS

Formulating Fair Competition Code 9
Wisconsin Mills Increase Production 10
Wisconsin Valley Safety Conference 10
Carthage Board Mill Resumes 11
G. H. Mead Sees Business Revival 11
President May Solve News Print Problem ... 12
Chicago Paper Market Improves 13
S. & W. Ships to Harley Bag Co. 13
Pulpwood Strike Averted 14
Boston Paper Trade Happenings 15
H. T. Newell Honored 15
Container Corp. Leases Wabash Mill 15
Philadelphia Paper Stock Market Buoyant ... 16
G. H. Mead on Planning Committee 17
Hjalmar Wessel Dead 18
New York Trade Jottings 19
Construction News 20
N. Y. Pulp Men's Golf Tournament 21
May Reopen Urbana Paper Mills 21
Editorial 22
Cedarville Plant Running Full 23
What About the White Collar Man? 23
Algonquin Sulphite Mill Resumes 23
Technical Section
Fibrous Raw Materials Committee Development Report 25
Method of Estimating the Dirt in Pulp and Paper 27
Pulpwood Holdings, A Company Asset..... 28
Opacity and Whiteness Test for Paper Coating Pigments 30
Comments on the Noll Method for the Determination of Lignin in Pulps 32
One Per Cent Caustic Soda Solubility of Pulp 35
Fibrous Raw Materials Testing Report 35
Institute of Paper Chemistry Graduation 36
Superintendents to Meet June 30 36
Imports of Paper and Paper Stock 37
New York Market Review 39
Miscellaneous Markets 40
Market Quotations 40

THE PAPER TRADE JOURNAL is indexed in Industrial Arts Index

Want and For Sale Advertisements, 44-45

MORE BANKER PROOF EVIDENCE
No. 14 of a series of actual mill reports. Watch for the rest.

Here's $1608.05 more saved by TENSILASTICS

Still the record of "Banker Proof Savings" resulting from Tensilastics' trouble-free, economical performance continues to grow. Here is a report from a sulphite mill* making Mitscherlich fibre wrapping and bag. A Tensilastic Rubber Press Roll ran five months in the second press and nine months in the first press,—fourteen months in all,—before grinding. Then back for another eight months tour in the first press, when it was again ground. But, says the report,

> "Roll did not need grinding at this time, but as they were making some changes, could do it better then than later. Roll still running in first press (six months later) and does not show any need of regrinding. . . . Average time between grindings of other rolls 5 to 6 months."

Compare this performance record over a 15-year term of service:

ORDINARY RUBBER PRESS ROLLS

4 replacements at $382	**$1,528.00**
Interest, $1,528 (mean of 7½ years)	**687.60**
Grinding every 6 months at $20	**600.00**
Interest, $600 (mean of 7½ years)	**270.00**
Total cost, purchase and maintenance	***$3,085.60***

TENSILASTIC RUBBER PRESS ROLLS

2 replacements at $382	**$764.00**
Interest, $764 (mean of 7½ years)	**343.80**
Grinding every 14 months at $20	**255.00**
Interest, $255 (mean of 7½ years)	**114.75**
Total cost, purchase and maintenance	***$1,477.55***

A clear saving of $1,608.05 to Tensilastic's credit.

Savings like these,—and even higher,—can be effected in YOUR mill, as they have in every mill that has learned Tensilastic's super-efficiency.

Tensilastics are definitely laboratory designed and laboratory processed to SERVE and SAVE. They last tremendously longer between grindings and show remarkable resistance to oxidation, deterioration, distortion, corrugation, wear and abuse. Their tensile strength and uniformity of density are maintained long after ordinary rolls are ready for the discard. And they can be duplicated again and again to unusually close specifications.

Every day you delay installing Tensilastics you are adding unnecessarily to plant overhead. Try a test installation,—press, table, breast, couch, wire or carrier rolls,—and let Tensilastic performance convince you.

* Name on request.

American Wringer Co., Inc.

Rubber Roll Specialists for More Than 40 Years

Woonsocket, R. I. Farnham, Quebec

Write for copies of
"The USE and ABUSE of RUBBER ROLLS"
"DENSITY and CROWNING of PRESS ROLLS"
"TENSILASTIC and WHAT IT MEANS"

33 No. La Salle St., Chicago—Pacific Coast Representative: Walter S. Hodges, Lewis Bldg., Portland, Ore.—461 Eighth Ave., New York

TENSILASTIC
RUBBER ROLLS